A

TREATISE

ON

TROPICAL DISEASES,

&c. &c. &c.

[illegible] Royal. 1809

A

TREATISE

ON

TROPICAL DISEASES;

AND ON THE

CLIMATE

OF THE

WEST-INDIES.

BY

BENJAMIN MOSELEY, M.D.

PHYSICIAN TO HIS ROYAL HIGHNESS THE DUKE OF YORK, AND HIS HOUSEHOLD, AND MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

LONDON:

PRINTED FOR T. CADELL, IN THE STRAND.

M DCC LXXXVIII.

TO THE

RIGHT HONOURABLE

CONSTANTINE JOHN

LORD MULGRAVE.

&c. &c. &c.

MY LORD,

THE following pages being the offspring of an earneſt endeavour to ſerve my fellow creatures, I am deſirous that they ſhould have the advantage of appearing, under the auſpices of learning, judgment, and candour.

I confeſs, my Lord, I feel the utmoſt diffidence in preſenting a literary performance, to a perſon ſo well verſed in every branch of ſcience as your Lordſhip;

ſhip;—yet the motive that gave birth to it, flatters me with the hopes of that patronage, which has ſo often been exerted by your Lordſhip, in the cauſe of humanity.---That your friendſhip has enabled me to witneſs it, I eſteem among the happieſt events in my life.

If you approve the attempt, I am certain of the favourable judgment of thoſe, whoſe good opinion I am moſt anxious to obtain.——If you condemn it, I know the fate it deſerves, and that it ought to meet with from the world.

I have the honour to be,

My Lord,

Your Lordſhip's moſt obedient

And moſt humble ſervant,

BENJAMIN MOSELEY.

London, Cecil-Street,
November 30, 1787.

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PREFACE.

THE first part of the following treatiſe on the Dyſentery again appears, with ſome alterations; it was originally publiſhed in the Weſt-Indies, and has often been republiſhed in the iſlands, and in different parts of Europe. But the ſecond and third parts, together with every other part of the preſent volume, are now firſt ſubmitted to the world.

The practice I have recommended in the treatment of the Dyſentery, has not only been approved in the Weſt-Indies, but is adopted in many parts of Europe, and of the Eaſt-Indies.

The principal ſeat of the laſt war being in America, the belligerent powers had many troops in all the Weſt-Indian Iſlands: where the French and Spaniards, as well as the Engliſh, had great part of their forces, deſtined for

particular ſervices, exterminated by the Bloody Flux.

It was chiefly owing to the ravages of this diſeaſe in the French armies, that the Engliſh Iſlands were not invaded earlier; and it was alſo owing to the ſame cauſe, that the Engliſh forces were, in many inſtances, unable to retaliate on their enemies.

Notwithſtanding the method of treating this ſevere calamity ſucceſsfully, by the means of Sudorific Medicines, was not publiſhed until the war was conſiderably advanced, and had a multitude of prejudices to contend againſt; before its concluſion, many French, American, and Engliſh army ſurgeons, had intirely laid aſide the uſual, but uſeleſs reliance, on Purgatives, Opiates, and Aſtringents; and followed this practice with the utmoſt ſucceſs, under all the diſadvantages to which the military are ſubject, from the ſcarcity of neceſſaries, and bedding.

I have not increaſed the volume of the Materia Medica by any new medicine or compoſition, in the cure of this diſeaſe: nor can the articles I recommend be exceptionable, either on account of their bulk, or complexity; for they

they occupy but a ſmall ſpace in a ſurgeon's cheſt, and require but little time, and no trouble in preparing them.---I have aimed at the ſame œconomy of ſpace and time, in every other diſeaſe I have treated of.

It is a cuſtom of very ancient preſcription in phyſic, for authors, when advancing any new doctrine, to ſelect their ſucceſsful and remarkable caſes, to ſupport their principles; and ſome have been ſo intent upon this object, as to ſtamp their labours, even with doubtful marks of authenticity, rather than with none, to obviate ſuſpicion.

From the frequency of this cuſtom, though I have not implicitly followed it, I ſuppoſe it has been found uſeful by thoſe who have. But whatever private advantages may have been acquired, the cuſtom ſeems to me of leſs utility to mankind, than if ſuch writers had ſignaliſed their failings, and placed beacons on the rocks, where the wrecks were made.

A few only have dared to imitate the candour of HIPPOCRATES and SYDENHAM, in this:--- In that, every dabbler in phyſic decorates his volume, and illumines thoſe pages, which he

fondly hopes, will be the guide for posterity.

'Tis true that it requires great reputation, or an extraordinary good opinion of the world, to confess to it our errors, and to offer mankind instruction by those unpleasing lessons which result from human frailty. Therefore, an obscure individual prudently weighs the danger of recounting his mistakes; leaves honest confessions to men at the summit of human wisdom, and seizes his proselytes, by asserting the infallibility of ignorance.

There is another transgression against the laws of tyrant custom, which will be found that I have made, in several parts of the following work;—where, instead of drawing out my materials into long dissertations, I have often condensed the experience of many years into a short paragraph, and have trusted its support only on my own assertion.—Such is what I have said relative to the bites of venomous Serpents, and Mad Dogs: and also to the Hooping-Cough, Asthma, and Hæmorrhages from the Lungs.

The daily publication of medical books, and promulgation of new systems in physic, lead to a supposition that either physic is not a science of

of books, and capable of being imparted through the medium of words; or that medical writers have aſſerted a great deal more than they have been able to maintain.

The raiſing of theories in oppoſition, one againſt another, and not attending to diſeaſes and the improvement of practice, has been the employment of many medical people; and they have accordingly had the ſucceſs to convince the world, that they underſtood better how to talk of diſeaſes, than how to cure them.

Diſeaſes unfortunately are not to be conjured down with words;—if they were, the ſchools of MARCELLUS and SAMONICUS had ſtarved the followers of HIPPOCRATES.

Yet it muſt be confeſſed, that in the writings of many of the modern theoriſts, there are excellent remarks, and profound pathological reaſoning on diſeaſes; but when we come to the curative part, we clearly ſee the truth of SYDENHAM's remark, "that ſpeculation and practice ſeldom meet in the ſame perſon;" and the admiration we beſtow on the eloquence and force that they employ in chaſtiſing the practice of others, vaniſhes at the ſight of their own preſcriptions.

 Every

Every person knows, not only the ſage precepts, founded on practice, but the accurate deſcriptions, drawn from nature, of HIPPOCRATES: and what oppoſition his doctrine experienced from ASCLEPIADES and THEMISON, and how often its place has been uſurped by the confuſed and unnatural jargon of ſectaries and ſophiſts: and every perſon alſo knows, that prior to SYDENHAM, though there had been many attempts at new theory and reformation, after the reſtoration of learning, yet from GALEN's time there was but little improvement in the practical part of phyſic. And if we except the ſtrange innovations of PARACELSUS and HELMONT, there was ſcarcely any eſſential alteration in it.

When we look back on that interval of fifteen hundred years, and ſurvey the huge maſſes of literature which were brought forth in it, as at the remains of barbaric monuments, though we cannot admire the beauty of the fabric, we muſt wonder at the labour and patience of the compilers.

It is as difficult to aſcertain when hereſy and ſophiſtry will ceaſe in phyſic, as in religion. Within theſe few years, when the great NEWTON lighted

lighted up the world, it was the fashion of physic to talk learnedly on *Cartesian* errors; to purge and vomit mathematically; and to be able to account for all things geometrically, and to have a perfect acquaintance with every thing, but nature.

If each of the laborious writers of that, and former periods, instead of writing on every disease, had taught us effectually to cure one;—if instead of making books they had made observations on diseases, even the *Gout* might have submitted;—the *Insane Mind* might have been restored, and the cause explained, wherefore that derangement of the intellectual, exists without impairing the corporal, faculties.—The *Tetanus* would probably no longer have perplexed us, nor wherefore that terrible disease so partially and violently invades the body, without disturbing the mental, and vital functions.

But the misfortune to which the science of physic has been, and must ever be subject, is, that those who will write most, must be, in general, least qualified; for large books cannot be written in the hurry of extensive practice; and nothing but extensive practice can cure a man of prejudices, and qualify him to write at all.

 Besides,

Beſides, there is more labour in writing with due care and caution, in this important ſcience when a man has furniſhed himſelf with materials, than many have fortitude, or perhaps health to encounter. This has no doubt deprived the world of many great diſcoveries; and had nearly kept from it the invaluable treaſure bequeathed by SYDENHAM; who never ſat down to write in the latter part of his life, but he was inſtantly attacked by that excruciating diſorder the gout; which at length brought on other diſeaſes that terminated his exiſtence.

Yet if honeſt zeal for the welfare of mankind, and a deſire to juſtify their good opinion, could alienate ſelf-intereſt from its attachment, and ſtimulate every perſon who has had ſufficient experience, and who might find leiſure alſo to undertake the taſk, we ſhould probably have had many SYDENHAMS among us. But fame, I fear, acts feebly upon hearts, to whoſe ventricles the ſacred appetite for gold, has long been fixed and rivetted.

Thus inſtead of men of great experience and mature judgment, the world muſt expect to ſee young dictators come forward, to drive the nail of phyſic, and preſcribe its irrevocable laws. And

And thus diseases are created, and cures performed, that have only had existence, like BERKELEY's matter, "because they were "perceived by the ideas."

As the result of experience is the only useful knowledge in physic, every interesting fact, founded thereon, should be rescued from oblivion; and those who have contributed their mite to form collections of this sort, deserve much more of mankind than many who have written volumes of insipid imitation, or fine spun theory; the common sense of which might generally be described on the margin of their works.

The present learned and esteemed president of our London College of Physicians, Sir GEORGE BAKER, has judiciously revived a species of medical literature, that has been too much neglected. Encouraged by his example, a genuine repository may be formed, that will add reputation to the professors, and sustain the dignity of the profession. But while novelty is sought for, and every trivial thing avoided, care should be taken that no fabrication, from the mutilated remnants of our ancestors, be admitted. We lament to view their venerable

garments cut up into the faſhion of the day*, and the wearers claiming them as their own, paſs them on the world, as if they had never been ſeen before.

Great as the advances have been in anatomy, and great as the maſters of that ſcience are, in France and England, while they triumph over their anceſtors, they will but prepare triumphs for poſterity, if that part of the ſcience which applies to the diſcovery, and conſequently to the cure of diſeaſes, be neglected for curioſity; ſhould comparative anatomy have nothing profounder to relate than that fiſhes have the ſenſe of hearing; that dogs owe the acuteneſs of their ſmell to the ſtructure of their noſes; and that wings would have been an uſeleſs appendage to man;—ſhould phyſiologiſts become virtuoſi; ſhould BONET and MORGAGNI be thrown upon the ſhelf, and the columns be conceded to "an "Alligator ſtuffed, and other ſkins of ill-ſhaped "fiſhes:" In ſuch a relapſe of ſcience, if profeſſors ſucceed, they muſt owe their conſequence to the diſgrace of their art;---the admiration of the vulgar.

The ſcience of phyſic has derived leſs practical benefit from phyſiology, ſince the diſcovery

of the circulation of the blood, and the diſtribution of the chyle, than is generally imagined. GASSENDUS would have been diſappointed in his hopes, had he lived until theſe days.

For much remains to be done; and though the great HARVEY, the ingenuous ASELLIUS, and the fortunate PECQUET, made ſuch grand contributions to the ancient ſtores, with the late diſcoveries that have been added, and the advantages which the art has received from injections, and glaſſes, the field is not to be abandoned to *Amateurs* alone, to revive the legitimate ſpirit of inquiry, that animated the genius of ARISTOTLE, FABRICIUS, and HARVEY.

Modern ſurgery has eminently advanced itſelf as an important branch of the healing art. It was indeed not long ago, Mr. Serjeant Surgeon BERNARD's opinion, "That there were "more uſeful operations among the ancients, "omitted or diſcontinued by us, than we have "invented;" which probably may be true even at this day. But the modern advancement of ſurgery, excluſive of the advantage which the operative part has acquired by the excellence of our inſtruments, and the contributing branches

of

of mechanics, arifes rather from taking away, than from adding any thing to the practice of the ancients; and from fimplifying their methods, many of which were coarfe, violent, and barbarous. We do not, at this day, like ancient furgeons, hang people up by their feet to beams, nor rack them on Procruftean beds, to reduce diflocations, without any regard to anatomy.

Chemiftry has opened abundant treafures for the purpofe of medicine. The Materia Medica has regularly received addition, and alteration, as that fcience has advanced; and has fcarcely retained any thing but Bark and Opium, that the vegetable kingdom can call its own.

The utility of botany in phyfic, appears to correfpond, in an inverfe ratio, with the labour that has been beftowed on it.

From natural philofophy great medical advantages have been obtained; by that we have learned to imitate, to augment, to diminifh, and to apply many of the operations of nature; and to combine fuch of her powers, as anfwer our purpofes better in a mixed, than in a fimple ftate. We turn hopelefs from the toils of anatomy,

anatomy, to this sublime revelation, for a solution of the phenomena of the nerves, which at present confound us.

In this enlightened age, when almost every person who can read, makes pretension to some science or other; when ignorance is no longer fashion, nor emulation in arts disgraceful;—that labour, which in former ages of the world would have crowned an author with immortality, now, can hardly secure his fame the duration of an Ephemeron.—Yet he who ventures fairly on that "sea of troubles," which none but authors know, for promoting the welfare of society, ought not to repine.—His conscious motives should bear him up;——for to have lived to such a purpose, however short the existence, may be remembered without that bitter soliloquy, "few and evil have been "my days."

Whatever may be the fate of this publication, I have the satisfaction of knowing, that it contains a faithful relation of facts; and as far as concerns the West-Indies, the result of twelve years extensive practice there. However, I should not have troubled the world

with

with it, if I could not urge in its defence, that I never could cure the diseases to which it extends, by those books that have been already written on the same subjects by others.

It is under this conviction I have presumed to offer this volume, as a specimen of my sentiments, and of what I intend further to publish, on Diseases in Tropical Countries. And if in the course of this work it shall be found that I have mistrusted the skill or accuracy of others, it is because every day's observation convinces me, that there are not so many extraordinary diseases incident to mankind, naturally, as have been asserted; and that there are many symptoms described as pathognomical of many more, that are but the issue of improper treatment. These evils I attribute to the poison of medical literature, raised on theory, without experience; where men, following one another like Cranes, are taught to storm human infirmities mechanically:—before whom, nature and the disease, like a fortification assailed by mortal engines calculated by rule for its destruction, often fall together, and are buried under the same ruins.

N. B.

N. B. Wherever the great authorities of HIPPOCRATES, GALEN, and SYDENHAM, have been uſed in the following pages, it may be proper to ſay, I have referred to the following editions of their works:---The Venice edition of HIPPOCRATES, of 1657, by FOESIUS; the Baſle edition of GALEN, of 1538, and FROEBENS, of 1562; and the Amſterdam edition of SYDENHAM, of 1741. I have often given the Latinity of the reſpective editions of HIPPOCRATES, GALEN, and other writers, for the ſake of general utility.

ON THE

CLIMATE

OF THE

WEST-INDIES.

TO thoſe who are impelled by neceſſity, or induced by intereſt, to viſit the torrid zone, and relinquiſh the bleſſings which flow from exerciſe in the delightful climates of the earth, in temperate regions;---to thoſe who exchange their native countries, which yield the free and unbounded enjoyments of ſpontaneous health, for ſuch as no care, nor

 art,

art, can ever make agreeable;—ſome cautions may be neceſſary—ſome precepts uſeful.

That health is retainable by Europeans in hot climates, is well known and experienced. But when the numerous and expenſive requiſites have been obtained, the rigid reſtrictions, and ſelf-denials, that are ſtill neceſſary to keep the body and ſoul in uniſon, render the poſſeſſion of health ſo often a matter of neglect, that human fleſh, diſſatisfied to exiſt in the inſipid ſecurity of temperance, reſolutely compounds for a ſhort life, or impaired faculties, and ſeizes the preſent hour of pleaſure, and dangerous enjoyment.

In countries between the tropics, the heat is nearly uniform, and ſeldom has been known to vary through the year on any one given ſpot, either by day or night, ſixteen degrees.—It is at a medium on the coaſt, and on plains not much elevated above the level of the ſea, at about eighty degrees of *Fahrenheit's*,

or

or twenty-one degrees of *Reaumur*'s thermometer.

During the ſix months of the year, when the ſun has paſſed the line on his annual return to either tropic, that ſeaſon is called the Summer ſeaſon: ſo from the twentieth of March (when the ſun paſſes the Equator into the Northern hemiſphere, to viſit the tropic of *Cancer)* until the 21ſt of September, when he repaſſes it to the Southern hemiſphere, to reviſit the tropic of *Capricorn*, it is conſidered the Summer ſeaſon in our Weſt-Indies; and the remainder of the year, the Winter.

This is the Winter and the Summer of countries, where in general there is not more than ſix degrees of difference of heat, between the coldeſt ſeaſon in the month of January, and the hotteſt ſeaſon in the month of Auguſt; where the heat is always exceſſive on the whole, and where the ſun riſes and ſets all the year round at nearly the ſame hours, and where there is but little crepuſculum, or twilight.

But though the ſun imparts his influence almoſt equally within that tropic, for which he has paſſed the equator; yet the parallels under his vertical rays, doubtleſs, receive the greateſt portion of heat: but the difference is inconſiderable, and the inhabitants on the ſame ſide as the ſun, find generally the ſame oppreſſive uniformity.

This is to be underſtood of the climate at large, as unconnected, and uninfluenced by local circumſtances, as mountains, vallies, woods, &c.

Upon the mountains between the tropics, as upon the mountains in Europe, the air is cold in proportion to their height. In ſome of the iſlands there are mountains which afford agreeable ſituations; and on the continent, there are gradations of every degree of climate of the habitable globe.

Under the equatorial line on the continent of South America, in the province of

of Quito, the ſummits of the mountains of *Pinchinca*, *Cotopaxi*, and ſeveral others of the Cordelleras, are conſtantly covered with ice and ſnow. In the conqueſt of *Chili*, many of the Spaniards were frozen to death ſitting on their mules, in croſſing the mountains that divide *Chili* and *Peru*. The ſummit of *Cotopaxi* is computed to be 6643 Engliſh yards above the level of the ſea*; which is 1562 yards higher than *Mont-Blanc* in Savoy †.

The refreſhing and unremitting Eaſtern breezes which alone could render the Weſt-Indies habitable, are influenced in their courſe by the direction of the ſun. When the ſun is in his progreſs to the Northern tropic, the breeze obliquely bends towards his tract, and blows after him from the South of the Eaſt. When the ſun is on his return to the Southern tropic, the breeze is inclined after him

* *Ulloa.*

† *Bourrit.* The ſummit of *Mont-Blanc*, is 3960 yards above the valley of *Chamouni*, which is 1121 yards above the level of the Mediterranean ſea.

 that

that way, and blows from the North of the Eaſtern point; ſo that the whole range of the breezes, or trade winds, compriſes about thirty degrees of South and North latitude. Sometimes, when the ſun is on the South of the equator, the Winter's winds from the Northern continent extend into the latitudes of the Eaſtern breeze, and overpower it with great violence: Hail is ſometimes brought with thoſe winds, but never ſnow.

The Northern tropical Winter and Summer may be ſub-divided into four periods: the firſt beginning in April or May, with the vernal rains, which commonly continue ſix or eight weeks. Then the ſecond advances, which is the hotteſt and drieſt ſeaſon of the year; for the ſun being, on the twenty-firſt of June, at the tropic of *Cancer*, has finiſhed his fartheſt Northern declination. The third commences in September, with the autumnal rains, which are heavy and violent: and the fourth in December, after the autumnal rains have ceaſed.

This

This is the cooleſt and pleaſanteſt ſeaſon of the year, the ſun being, on the twenty-firſt of December, at the tropic of Capricorn, his greateſt Southern diſtance. The weather is now generally dry and ſettled, accompanied with night winds from the land, in all the countries whoſe mountains are ſufficiently lofty to cool the air; with frequent North winds in the day.

Although there is no regularity in the ſetting in, or duration, of the vernal and autumnal rains, yet there are ſeldom any rains that are violent or laſting, from November until April. The Spring periodical rains, moſt commonly, in the iſlands, fall in May, though ſometimes not until June: and the autumnal rains ſometimes commence in Auguſt, though generally in October: but the time for the greateſt rains, as well as the greateſt heat, on the continent, as well as in the iſlands, is between the months of April and November: and the greateſt degree of dryneſs and coolneſs is during the

months of December, January, February, and March. This is the ſeaſon, when people who can chooſe their opportunity, ſhould arrive in the Weſt-Indies; and this is the ſeaſon when military operations ſhould be carried on there; and alſo when ſhips of war, or troops, ſhould be ſent out to relieve, or ſupply, any ſtation or garriſon, in order that the men might be ſeaſoned to the climate, before the heat, rains, and unhealthy ſeaſon come in.

The voyage ſhould be undertaken ſo as not only to accord with this great object, but alſo to avoid being on the ſea between the tropics in the Weſtern latitudes, in the months of Auguſt, September and October: for moſt of the hurricanes that have afflicted this part of the world, have happened in the Autumnal ſeaſon; and therefore, theſe are properly called the hurricane months.

Hurricanes generally ſet in from the North, or North-Weſt, from the great rarefaction

rarefaction of the air within the tropic of Cancer, by the sun's northern declination at this season of the year; from which an influx of dense air rushes in from the polar regions, and the great western continent (the earth being susceptible of much greater degrees of cold and heat than the ocean, which is preserved in a more uniform temperature, from being incapable, like all transparent bodies, of deriving heat from solar light) and a great conflict is raised; the wind varying sometimes from every point of the compass until an equilibrium is restored, and nature composed by the eastern winds regaining their course.

When Europeans embark for the West-Indian islands, they must bid farewell to the sports of the field. There are neither hounds, nor hares, nor stags, nor foxes; and it is well there are not, for the enthusiasm which those sports inspire, is not to be curbed by craggy rocks or precipices, nor by grave lessons, or fatal examples.

Horse-

Horſe-racing has been introduced into ſome of the iſlands, and as a ſpecies of gaming, to the inconvenience of ſome, and to the advantage of others. But though it may contribute to improve the breed of that uſeful animal, the horſe, in the colonies, climate which will not permit ſuch violent exertions, forbids much pleaſure from it, as an animated amuſement.

It is fortunate for thoſe who have been accuſtomed to country-ſports, that there are but few inducements to allure them here; but there are ſome to which many have paid the tribute of their lives.

The *Snipe* is found here in great numbers; but this univerſal inhabitant of the earth meets with no more quarter here than in Europe, notwithſtanding the danger which is often experienced, from fevers acquired by purſuing him through the wet and marſhy places where he reſorts; which ought, in hot climates at leaſt, to be his ſanctuary.

Had

Had the present race of Europeans been as superstitious about their *bones* as the *Patriarchs*, the *Greeks* and the *Romans* were, the tropical colonies had never existed as countries of wealth and commerce.

The hardy followers of COLUMBUS and GAMA* (for none but the strongest spirits dare to leave their homes for new enterprize) have had no terrors of mind respecting their bodies, but adventured like heroes, with hearts, not like VIRGIL's hero's, to be terrified at a storm†. Regardless of their fate, they boldly undertook, and fearlessly em-

* The two first navigators to the *West* and *East-Indies*; the former was sent out from Spain by *Ferdinand* and *Isabella*, in August 1492; and the latter from Portugal, by *Emanuel*, in 1497.

† Extemplo Æneæ solvuntur frigore membra.
Ingemit, et duplices tendens ad sidera palmas,
Talia voce refert: O terque quaterque beati,
Queis ante ora patrum, Trojæ sub mœnibus altis
Contigit oppetere!

ENEID, Lib. I. Ver. 96.

barked

barked in the ſevereſt labours, ſurrounded with dangers, and planted and became the patriarchs of colonies. They bid adieu to their countries, which perhaps had depreſſed their genius, or perſecuted them for debt, or religion; and ſcorned, as they could not reviſit their native homes in life, to entertain the hopes of returning to them, like negroes, after death. Such were the firſt ſettlers of the colonies.

Great as the mortality has been to accompliſh the preſent flouriſhing ſtate of the ſugar colonies, and great as the expence of human lives muſt be to maintain them, their commerce has contributed to raiſe the nations to which they belong, to a condition of riches and grandeur, that European induſtry, without them, could never have attained.

In the voyage to the Weſt-Indies, after the warm latitudes are reached, it becomes every perſon to prepare his body, by temperance, for the unavoidable change

it

it muſt undergo: and to people of a groſs habit, and of a ſtrong and full conſtitution, a mild purge or two, or frequently diluting with a weak ſolution of cream of tartar in water, if not bleeding, is neceſſary. The neglect of theſe precautions occaſions violent perſpirations, troubleſome heats, and eruptions. Coſtiveneſs, a common inconvenience at ſea, ought to be removed by ſome mild purgative, as ſalts, manna, cream of tartar, or magneſia; and the return of it prevented, in approaching the end of the voyage.

On firſt arriving, though the uſe of the neceſſaries of life, and the moderate gratification of natural deſires, are by no means interdicted in hot climates, yet every exceſs is dangerous; and temperance in all things is neceſſary to be obſerved by men, women, and children. For youth, abſtemiouſneſs for a while, is the beſt ſecurity againſt illneſs.

In

In regard to the article of drefs, new-comers cannot do better than follow the prefent cuftom of the refidents on the iflands: their clothes fhould be light, made eafy, and every way free from confinement. Formerly the inhabitants of the Weft-Indies wore heavy European garments, covered with lace: the inconvenience attending that cuftom induced them to an oppofite extreme; and here they found that the wearing of linen, cotton, or filk coats, though agreeable enough in the fun, and in the day time, was not a fufficient defence againft any fudden change of weather, or the night air. A cloth coat, therefore, and every other part of the drefs as light as poffible, is now worn by people in health.

For women, the light Summer drefs of Europe is proper.

Moft people, foon after their arrival, are attacked with what is called the *Prickly Heat*. This is an eruption of fmall red pimples, unattended with any fever, which

which breaks out in different parts of the body, particularly where the parts are kept the hotteſt by the clothes, or where there is the greateſt irritation, and friction. It cauſes ſuch intolerable itching, or heat, and pricking in the ſkin, that human reſolution cannot refrain from ſcratching, until the ſkin is, ſometimes, excoriated. Many people have it every year, more or leſs, during the hotteſt months. It generally goes off in a few weeks, leaving the cuticle ſcurfy, which falls off in ſmall white ſcales. Sometimes it continues very obſtinate, and where people live heated by intemperance, or have any ſerpiginous humour in their habit, it fixes it on the ſurface of the body, in troubleſome ring-worms.

There is great danger in repelling the *Prickly Heat*; therefore *cold bathing*, and waſhing the body with cold water, at the time it is out, is always to be avoided. A gentleman, a native of the country, bathed in the Spaniſh-Town river, in Jamaica, in the month of July, 1779, with

with the *Prickly Heat* on him, which was ſtruck in by it, and cauſed a tedious fever, with an affection of the brain, from which he recovered; but his mind was for a long time afterwards impaired, by a ſtupor and deſpondency.

When the *Prickly Heat* is very troubleſome, abſtemiouſneſs, with a cooling regimen, will ſoon remove it.

HILLARY ſays, the Prickly Heat is the *Ἵδρωα* of the Greeks, the *Sudamina* of the Romans, and the *Eſſera* of the Arabians. But whatever reſemblance it may have to the Ἵδρωα, or *Sudamina*, it has none whatever to the *Eſſere*, which is an entirely different ſpecies of eruption from the other, as deſcribed by the Arabians*, but

* *Eſſere* eſt puſtula parva lata ſicut veſicæ, et ad aliquantulam tendens rubedinem et pruritum faciens, et anguſtiam: eveniens ſubito ſecundum plurimum. Et accidit quandoque ut currat ab ea humiditas; et fortaſſe eſt ſanguinea. Et ſecundum plurimum fit vehemens in nocte, et ejus anguſtia fit in ea vehementior, et ejus triſtitia, &c. Et quum *Eſſere* invadit locum amplum, tunc ſi non fiat phlebotomia, timetur Febris Tertiana. AVICENN. lib. IV. fen. 3. tract. 1. cap. 13. Vol. II.

but unnoticed by the Greek and Roman writers, and what we ſuppoſe to be the *Nettle-raſh*. Indeed I cannot ſee any reſemblance the tropical *Prickly Heat* has to the Ἵδρωα of the Greeks, or to the *Sudamina*, or *Papulæ Sudoris* of the Romans. Theſe eruptions are claſſed among the diſeaſes of Summer; *Galen* terms them exanthematous, and they are generally deſcribed to be acrid, red puſtules, containing humour, cauſing great heat and itching, and ulcerating the ſkin.

Cleghorn has made a proper diſtinction between the *Sudamina* and *Eſſere*; but ſays the *Minorca* Raſh, or Prickly Heat, is the ſame eruption as the *Sudamina*, or Ἵδρωα, which from the climate I ſhould think very probable, although his deſcription of it does not correſpond exactly with the deſcription which Celsus *, Galen †, and Actuarius ‡, have given of the *Papulæ*, or *Sudamina* §.

* Lib. V. cap. 28.

† Comment. III. in Aphor. Hipp. 21, Sect. 3.

‡ Aliquibus et quales Sudores, Ἵδρωα, et noſtris *Sudamina*, inde nuncupantur, erumpunt, nec quicquam mali portendunt, ſed e materia ad cutem ruente gignuntur. Producit ea ſalſus et mordacis qualitatis particeps hu-

Bontius has accurately deſcribed the Prickly Heat of *Java*, and ſays, that the eruptions are the ſame that Celsus calls *Papulæ*, Pliny *Sudamina*, and the people of Holland *Root-vont*; but they certainly are not.

Beſides the Prickly Heat, there are, in the Weſt-Indies, veſicular and exanthematous eruptions and efflorefcences, to which new-comers, and others, are ſometimes ſubject in the hotteſt months, which reſemble the Ἱδρωα, *Papulæ*, *Sudamina*, *Eſſere*, and what Hippocrates calls Φλύκ]αιναι,

mor, ac pungunt ſenſumque vellicant et diſcuti deſiderant varios pruritus excitantia. Horum quædam quum ſcalpuntur, ſanguine manant: alia ſub candidum vel leviter pallidum humorem expuunt, ut inde vigentem ſuccum colligere liceat. Nonnulla demum in ſcabioſos affectus commigrant, et exulcerationes exanthematis ſuccedunt. *Actuarii* Method. Med. Lib. II. cap. 23.

§ Vogel, in Cullen's Synopſis Noſol. defines the *Hydroa*, *Boa*, or *Sudamina*, "Puſtulæ *milii magnitudine*, "*aquoſæ*, *ſine rubore et ullo dolore*, ex ſudoribus repente "ſparſim toto corpore emergentes."—This definition is by no means deſcriptive of what the Greek and Roman writers called *Hydroa* and *Sudamina*. It is not deſcriptive of what we call the *Prickly Heat*. Pliny, Lib. XXVI. cap. 11, ſays, "Boa, id eſt *rubentes Papulæ*."

the

the eruptive produce of Summer in temperate climates.

There is a race of viſitors alſo which gives ſome uneaſineſs to new-comers; theſe are gnats, or, as they are called, *Muſquitoes*. They are moſt troubleſome towards night, in warm wet weather, and near woody, damp, or marſhy ſituations. ---Many parts of Italy are infeſted in the ſame manner.

Though they are a great vexation in all the iſlands, yet they are worſe on the continent. It is ſaid at *Mexico*, and ſome other places, that they ſometimes kill people with their bites. *Sir Henry Morgan* thought, from the amazing quantity which he ſaw at the lake *Maracayba*, that it was a cloud before him.

Their bites raiſe little lumps, or ſwellings, in the ſkin, which cauſe an uncommon degree of itching; theſe are ſcratched ſometimes into troubleſome ulcers, particularly in the legs. A bite, if it is not ſcratched, or irritated, though it is extremely diſagreeable, will not long continue troubleſome. Some people apply oil,

vinegar, lime-juice, or camphorated ſpirits to the part, to allay the itching and tingling. In the inland and woody ſituations, even thoſe who have been long reſident in theſe countries, find it convenient to wear a ſort of looſe linen buſkins, to guard their legs in an evening; and it is an univerſal cuſtom to have a gauze curtain, or net, to ſurround the bed, to keep them away by night; otherwiſe, in ſome ſituations, it would be impoſſible to ſleep.

Fires and ſmoke drive them away, and this is another practice uſed by people who reſide in the woods, and interior parts of the iſlands. On the continent, in ſome places, the Indians bury themſelves in ſand in an evening, having no other means to avoid their perſecution *.

Another tropical inſect ſometimes attacks the feet and toes of new-comers, and ſurpriſes them with an unuſual ſenſation of itching; the reſidents are equally ſubject to the plague of theſe almoſt in-

* Lussan.

viſible

visible vermin, and are sometimes lamed by them. These are *Chigoes*, a kind of little fleas: they chiefly keep in dusty, dirty places, and are bred on hearths, and in chimney corners, among the ashes: they are about the size of a cheese mite. They lance the skin imperceptibly in the soles of the feet, or about the toe-nails, and insinuate themselves, where they deposit their eggs, including them and themselves in a little round vesicle, which increases to the size of a small pea sometimes before it is noticed. It then acquires a bluish appearance, from the colour of the *Chigo* itself, which is in the midst of an innumerable quantity of *animalcula*, each of which is capable of creating a new disturbance, if in taking out the bag it be broken, and any of them remain behind in the flesh. Some people have had great inflammations from them, and some have had their toes mortified. The negroes often let them collect and remain in their feet, until their toes rot off. The common method of taking out the bag is with the point

 of

of a needle, without piercing it, by separating it from the skin quite round, and drawing it out; then filling up the hole, and rubbing the part with tobacco ashes. Ligon says*, he had ten chigoes taken out of his feet in a morning, while he was at Barbadoes (which was from 1647 to 1650), by the most unfortunate Indian woman YARICO †.

There is also abundance of scorpions, tarantulas, centipes, and spiders, whose stings and bites are extremely painful, but rarely attended with danger. The tarantulas have their habitations in loose rocky places, and in the mountains; and those other insects are generally found in old buildings, among rotten wood, and in unfrequented places: sometimes they creep forth into beds, and among people's clothes, particularly scorpions, and are not detected until they are discovered by their sting. Rum, or oil applied, generally abates the anguish of the wound: but if

* History of Barbadoes, p. 65.

† See the Spectator, No. 11.

a fever

a fever with convulſive twitchings, enſue, which in bad habits of body, or when the wound is in ſome part of great ſenſibility, will ſometimes happen, the wound ſhould be immediately ſlightly burnt with *Lapis Infernalis*, or any cauſtic, and afterwards poulticed, and the patient ſhould take ſome warm diluting diaphoretic, with an opiate.

Mrs. *Pidgeley*, at Kingſton in Jamaica, in 1781, was ſtung by a ſcorpion, on the foot, above the little toe. The part became inſtantly red and painful; and ſoon after livid. The pain increaſed to great ſeverity. Some rum was applied to the wound, on which the pain immediately left the foot, and paſſed up to the groin, with great agony. The pain ſtill paſſed upwards, and diffuſed itſelf about the pit of the ſtomach, neck, and throat, attended with tremors, cold ſweats, and languors. As the pain paſſed the abdomen, it occaſioned a violent purging, and fainting, which ceaſed on its advancing higher. I was called to her, and gave her the following medicines, a few doſes of which

which removed every ſymptom. She had been extremely ill for thirty-ſix hours.

℞ *Sal Succin.* ℈ *ij*; *Camphor. gr.* x *ij*; *Cinnabar. Antimon. gr.* x. *Confect. Card. q. s. fiant boli ſex.* One of theſe was taken every hour, with four ſpoonfuls of the following mixture: ℞ *Aq. Menthæ* ℥ *vij*; *Elix. Paregoric.* ʒ *ij*; *Syr. Croci* ℥ *ſs. Miſce.*

But though theſe inconveniencies are found in the iſlands, there are none of the greater evils, with which the neighbouring continent abounds; ſuch as tigers, lions, bears, wolves, and deadly venomous ſerpents.

Of the various venomous ſerpents in Spaniſh America, we have but an imperfect account from the Spaniards. They reckon the following the worſt, and moſt common:---The *Corales*, or Coral Snakes, which are about four or five feet in length, and an inch diameter, of a very beautiful appearance, their ſkin being variegated with a bright crimſon, yellow, and green, with a head ſhaped like the European ſerpent.

The

The *Cascabeles*, or Rattle Snakes; and the *Culebras de Bejuco*, or Bejuco Snakes, as they resemble the colour of the Bejuco, and from whose branches they hang down, and bite whatever disturbs them.

The *Hæmorrhous* is common at Carthagena, and is called by its proper name. It is also common on the Spanish Main, and Musquito Shore; where there are many other deadly venomous serpents; one species of which the Indians and inhabitants call *Tomogos*; and another the *Barber's Pole*, from the manner in which it is marked.

ULLOA says, "that a person bitten by "the *Coral Snake*, immediately swells to "such a degree, that the blood gushes out "through all the organs of sense, and even "the coats of the veins, and the extremi-"ties of the fingers burst, so that he soon "expires." These effects have been generally thought to belong only to the bite of the *Hæmorrhous*; but I believe the same effects are produced by all the tribe of deadly venomous serpents, and that there is no specifical difference between them, except in the violence and rapidity by which

which the poiſon is diffuſed in the body: the reſt depending on the heat of the weather when the accident happens, and the ſtate, and habit of body of the ſubject, at that particular time.

F. HOFFMAN is one among a multitude who has been deceived by the falſe report of travellers on this ſubject. He ſays, "In the iſlands of *Cuba*, *Jamaica*, "and *Hiſpaniola*, the bites of ſerpents are "highly injurious to the inhabitants." But in this HOFFMAN is miſtaken; for though the Spaniards exterminated the human aborigines of theſe iſlands, their immenſe woods, and inacceſſible mountains to men, had been the protection of ſerpents, if there had ever been any. But the Spaniards did not find any poiſonous ſerpents in theſe iſlands when they firſt went there, which PETER MARTYR has properly recorded. *Decad. I. Lib. I.*

There are ſnakes in the iſlands, ſuch as the large *Yellow Snake*, from eight to twenty feet in length: the large *Black Snake*, from four to twelve feet in length; and the ſmall *Black Snake*, and *Spotted Snake*, of about two, or three feet in length.

But

But the bites of theſe are not venomous, nor further troubleſome to cure than any other lacerated wound. Their depredations are confined to pantries, poultry, hens and pigeons neſts, young vermin, and reptiles. There are many fabulous ſtories related of the *Yellow Snake*, attacking calves and lambs, and twining round other animals and ſtrangling them:---and that the *Amphiſbæna*, or Silver Snake, has been found in the iſlands, and that its bite is venomous; but neither of theſe facts has been proved.

The bites and ſtings of all venomous animals are cured by the ſame local means: which are very ſimple if they were always at hand. In the bite of a deadly venomous animal, the injured part muſt be inſtantly deſtroyed, or be cut out. Deſtroying it is the moſt ſafe, and equally certain: and the beſt application for that purpoſe, is, the *Lapis Infernalis*, or the *Butter of Antimony*;---theſe are preferable to an hot iron, which the ancients uſed, becauſe an hot iron forms a cruſt, which acts as a defence to the under parts, inſtead of deſtroying them. The *Lapis Infernalis* is much

much better than any other cauſtic; as it melts and penetrates during its application. The bitten part muſt be deſtroyed to the bottom, and where there is any doubt of the bottom of the wound being ſufficiently expoſed, inciſions ſhould be made to lay every part of it open to the action of the cauſtic application. Beſides deſtroying, burning, or cutting out the part, inciſions ſhould be made above the wound, to prevent the communication of the virus; and the wound is to be dreſſed for ſome time with acrid dreſſings, and hot digeſtives, to drain the injured parts.

Where the above-mentioned cauſtics cannot be procured, corroſive ſublimate, oil of vitriol, aqua fortis, ſpirit of ſalt, common cauſtic, or a plaſter made of quick-lime and ſope, may be applied to the wound. Gunpowder laid on the part, and fired, has been uſed with ſucceſs. When a perſon is bitten, remote from any aſſiſtance, he ſhould make a tight ligature above the part, until proper application can be made. The Spaniſh writers ſay, that the *Habilla de Carthagena*, or Carthagena Bean, is a ſpecific for

for poiſonous bites, taken inwardly;—but there is no relying with ſecurity on any thing, but the external treatment.

Galen ſays, when he was in Alexandria, there was a ruſtic a little way from the town, bitten on one of his fingers by an aſp; the man made a tight ligature on it, and ran immediately to town to a ſurgeon, who amputated the finger, and no miſchief enſued. He ſays he knew another, a vine-dreſſer, who being bitten on the finger by a viper, directly cut off the finger himſelf, with an hatchet, and without any internal medicine remained well *.

It has always been a matter of ſurpriſe to me that Hillary ſhould ſay *Canine Madneſs* "is ſo frequently ſeen in moſt hot "countries, and eſpecially in the Weſt-"Indies, that it may be ſaid to be ende-"mial †;" which is ſo far from being true, that if Hillary, who treats of it, and relates ſeveral caſes that fell under his care, had not been a man of good character, I ſhould have doubted whether he had ever ſeen a mad dog in the Weſt-Indies.

* De Loc. Affect. Lib. III. cap. 7.

† Page 245.

During

During my reſidence there, I never heard of the diſeaſe; and from the inquiries I have made, I am certain that there has been no canine madneſs in many of the iſlands, if in any of them, for fifty years, before the year 1783; and I am not ſatisfied with the authority that informs me it was ever there before that year. On that immenſe continent of South America, it has never been ſeen. ULLOA ſays, "the people there expreſs their "aſtoniſhment when an European re-"lates the melancholy effects of it:" and DESPORTES, who practiſed phyſic in *Hiſpaniola* from 1732 until 1748, ſays, that in that iſland they are intirely ignorant of it.

In the Spring of 1783, this diſeaſe broke out in *Hiſpaniola*; and in the month of June in *Jamaica*, where it raged until March 1784. It was ſaid at firſt, that it was brought to Jamaica from Hiſpaniola; but experience proved it to be otherwiſe.

The common notion that this diſeaſe among dogs can only proceed from the poiſon

poiſon of an external bite; or that it originates in ſome particular dog, from internal diſeaſe, and from thence is diſſeminated, has excluded the idea of ſpontaneous madneſs, ariſing from ſome peculiar influence in the air*. But this influence of the air generated the canine madneſs in the year 1783, in the Weſt-Indies; for it was general, and many dogs were ſeized with it, that had no communication with others; and ſome dogs that were brought from Europe and North America, and that were not on ſhore, went mad on their arrival in the harbours in the iſlands.

In Jamaica, it was general.---Many negroes were bitten and died *Hydrophobous.* A boy belonging to a lady in Kingſton was bitten by a little dog ſuppoſed to be

* This is experienced every year in many parts of Europe. In *Venice*, they ſuppoſe it is often brought on by thirſt; for which reaſon they oblige every barber, ſhoe-maker, and coffee-houſe keeper, to have a ſmall tub, or pan of water, always before their doors, particularly in hot weather, that the dogs running about the ſtreets may drink when they want; as there are no places in that city, where they can otherwiſe ſupply themſelves with freſh water.

mad,

mad, which was therefore killed. The bite, or rather ſcratch, was not larger than one made by a pin, being only a raſure of the ſkin, by a tooth. It was thought too inconſiderable to be hurtful. Four months afterwards, the boy was ſeized as if he had got a cold, and ſoon after ſymptoms of a *Tetanus* appeared. He died on the third day, but had no ſymptom of *Hydrophobia.*

An attorney-at-law in Kingſton was bitten by his own dog. The bitten part, which was in the ball of the thumb, was cut out. He was then ſalivated by mercury, externally and internally uſed; and he had no ſymptoms of diſeaſe. One of his negroes was alſo bitten, and treated in the ſame manner, and with the ſame ſucceſs.

Many hogs and goats were bitten, and died mad. A horſe belonging to Mr. *Edward Eaſt*, in Liguanea, was bitten, and being ſeized with madneſs, was ſhot. Another horſe belonging to a merchant in Kingſton was bitten. He broke out of the ſtable and ran about mad, until, by beating his head againſt a wall, he killed himſelf.

In

In the cure of the bite of a mad dog, the local treatment is alone to be depended on; and that local treatment the ſame which I have already related in the cure of the bite of deadly venomous ſerpents. Mercury is of no uſe; nor have any of the famous ſpecifics that have been impoſed on mankind, ever produced any effects that could be depended on. The ſooner the bitten part is deſtroyed the better. But where application has been omitted for ſome time, and even when the bitten part is healed, it ſhould be removed by taking out the fleſh all round, deeper than the wound originally was, by the *Lapis Infernalis*, and ſhould be dreſſed with acrid dreſſings, and be kept open, and digeſting, for many weeks. This method of treating the bite of bad animals, if in a part where it can be uſed, will, I am convinced, prevent their fatal effects; applied at any time previous to the firſt ſymptoms, that forerun a general affection, which ends in hydrophobia, and admits of no remedy.

The coaſts and rivers of all the iſlands abound with a vaſt variety of excellent fiſh; and thoſe of Jamaica are free from poiſonous fiſh, which infeſt the coaſts of ſome of the other iſlands.

I wiſh I could ſay that the rivers were exempt from *Alligators*, and the coaſts and harbours from *Sharks*: but that is not the caſe, and people ſhould never venture into rivers, nor harbours, to bathe, as terrible accidents frequently happen in the Weſt-Indies, from

these horrid creatures. A negro woman, belonging to Mr. *Kennion*, in the pariſh of St. Thomas's in the Eaſt, ſome years ago, was ſeized as ſhe was waſhing her linen, in *Plantain-Garden* River, and torn in pieces by an alligator. She was advanced a little way into the river, and as ſhe was ſtooping down with her hands in the water, the alligator ſeized her by the arm, dragged her away, and ſmothered her; from the depth of the water, and the muddineſs of the bottom, though the accident happened in the preſence of many people, they were unable to aſſiſt her.

Miſchief from ſharks happens almoſt every day, in ſome of the iſlands. During the war, while the *Pallas* frigate was lying in Kingſton harbour, a young North American ſailor who had been taken priſoner, and was detained in the ſervice, jumped overboard in the evening to make his eſcape: it ſeemed that a ſhark perceived him and followed him, very quietly, till he came to a ſtate of reſt near the ſhore. As he was hanging by a rope, ſcarcely out of his depth, that moored a veſſel to a wharf, the ſhark ſeized his right leg, and ſtripped the fleſh entirely away from the bones, and took the foot off at the ancle. He ſtill kept his hold, and called to the people in the veſſel near him, who were ſtanding on the deck and ſaw the affair. The ſhark then ſeized his other leg, which the man by his ſtruggling diſengaged from his teeth, but with the fleſh cut through down to the bone, into a

multitude of narrow ſlips. The people in the veſſel threw billets of wood into the water, and frightened the ſhark away. The man was brought on ſhore; I was called to him; but he had loſt ſo much blood before any aſſiſtance could be given him, that he expired before the mangled limbs could be taken off.

A few weeks before this accident happened, a ſhark, of twelve feet in length, was caught in the harbour; and on being opened, the entire head of a man was found in his ſtomach. The ſcalp, and fleſh of the face, were macerated to a ſoft pulpy ſubſtance; which on being touched ſeparated entirely from the bones. The bones were ſomewhat ſoftened, and the ſutures looſened.

It is evident that digeſtion in theſe animals is not performed by trituration, nor by the muſcular action of the ſtomach: though nature has furniſhed them with a ſtomach of wonderful force and thickneſs, and far exceeding that of any other creature. Whatever their force of digeſtion is, it has no effect upon their young ones, which always retreat into their ſtomachs in time of danger.

That digeſtion is not performed by heat in fiſh, is equally evident. Being on the Banks of Newfoundland in Auguſt, 1782, I opened many Cod fiſh, and ripped up their ſtomachs juſt as they came alive out of the water; in which were generally found ſmall oyſters, muſcles, cockles and crabs, as well as ſmall fiſhes of their own, and other ſpecies. The

coldneſs of the ſtomach of theſe fiſhes, is far greater than the temperature of the water out of which they are taken; or of any other part of the fiſh, or of any other ſubſtance of animated nature I ever felt: and on wrapping it round my hand, immediately on being taken out of the fiſh, it cauſed ſuch exceeding aching and numbneſs, that I could not endure it long.

In the Weſt-Indies, where a choice of ſituation for reſidence can be made, the more elevated, and the further removed from all kinds of water, the better. "Stagnant waters, and ſwamps, load the air with pernicious vapours, that are productive of obſtinate intermittent fevers, diſeaſes of the liver, and putrid diſeaſes. This was wofully experienced in Jamaica, when the naval hoſpital of that iſland was at *Greenwich*:---and in the autumn of every year, the air of thoſe ſwamps and marſhes to the weſt of *Kingſton*, and about the *Ferry*, extends its baleful influence to all the neighbouring habitations. I, among many other people, in paſſing that inſalubrious diſtrict, before the riſing ſun, have had a ſhivering and coldneſs, as in an ague. I have ſuffered the ſame effect in croſſing the lethiferous *Pontini* fens near *Terracina*, between Rome and Naples, juſt at the break of day.

The aſpect of an houſe may be towards any other quarter than the Weſt; but this will depend on ſituation, in ſome meaſure, and the conſtruction of the building. For if it has only a ſingle roof, in a long nar-

row

row range from North to South, and that the front is to the Eaſt, the ſun will bear all his force on its largeſt ſurface, from ſix to eight in the morning; and for the ſame reaſon, on the Weſt ſide, from four to ſix in the evening; and render it exceſſively hot. If it ranges from Eaſt to Weſt, the morning and evening ſun will have leſs ſurface to act on, and the building muſt neceſſarily be cooler, as the meridional ſun acts nearly the ſame on the roof, let it be placed how it may. But the Eaſt ſhould not be excluded on account of the breeze, and the afternoon ſhade and coolneſs; then if the building be ſingle, a North front, with windows, piazza, and balcony to the Eaſt and South, has the advantage; but if the building be large, and double, an Eaſt front is on the whole the beſt plan for an houſe in the Weſt-Indies.

These obſervations are equally applicable, whether the building be intended for a dwelling-houſe, or for barracks for ſoldiers, or for an hoſpital: and what LORD BACON ſays of houſes in England, is extremely pertinent to the ſame ſubject in the Weſt-Indies.---
"It were good for men to think of having "healthful air in their houſes; which will "never be if the rooms be low roofed, or "full of windows, and doors; for the one "maketh the air cloſe, and not freſh, and "the other maketh it exceedingly unequal, "which is a great enemy to health*."

* Cent. 10, exp. 937.

The dread of earthquakes, together with the consideration of œconomy, in the West-Indies, induce many people to build their houses very slight, and chiefly of wood; by which means they are subject to extreme heat by day, and extreme cold by night. Large rooms to keep the rays of the sun at a distance, and thick stone, or brick walls, to prevent their pervading, constitute the only requisites for a cool, healthful, and pleasant house in hot climates.--Such are the houses in Italy.

That mountainous situations are very healthful in the West-Indies, we have many proofs; and that people who have been ill in the lowlands, soon recover their health in the mountains, and avoid the trouble and expence of coming to Europe.

At Mr. *Hinton East*'s mountain, above the banks of Hope river, in Jamaica, the temperature of the air being at about 75 degrees of *Fahrenheit*, is moderate and agreeable. In a garden there, belonging to this worthy gentleman, there are a multitude of European productions in their native beauty. There are also the *Mango*, *Mangostan*, *Jack tree*, *Camphire tree*, *Gum Arabic tree*, and several of the spices of India; among which the *Cinnamon tree* flourishes in the highest perfection: two plants of which, each about six inches long, were brought to the island in June, 1782, in a French vessel bound from the isles of *France* and *Bourbon* to *Hispaniola*, taken by the *Flora*; these plants, with

with ſome others, were intended for the Governor of that iſland. This is the introduction of that valuable tree at Jamaica, which ſuits ſo well with its growth, that the two original plants bloſſomed and bore ſeeds in 1785, from which Mr. *Eaſt*, who poſſeſſes them, has produced many others: and it is probable that the birds, which have every year robbed his trees of a conſiderable quantity of ſeeds, will plant many more in the woods, and that *Cinnamon trees* will be found growing wild there, and give riſe hereafter to doubts concerning their origin.

If people, when they retire to theſe mountains for health, could leave their cares behind, and avoid the importunity of buſineſs, which is very difficult from the proximity of their homes, there would be leſs occaſion for European voyages than is generally believed. But they are too near the intereſting ſcene which perhaps diſturbed their health, unleſs they can reſolutely determine to have no communication with their counting-houſes and plantations: for in reality, coming to Europe, to the generality of people, and where a ſea-voyage is not abſolutely neceſſary, is only cutting off the communication with care and anxiety, and giving the mind that relaxation, which is neceſſary for the reſtoration of health.

Some of the mountains at the back of *Kingſton* in Jamaica, and in many other parts of the iſland, are remarkably healthful. At *Cold Spring* Mountain, the thermometer is

 ſometimes

ſometimes much below 60, though the diſtance is not more than two hours ride from Kingſton *, where it is on a medium at 83 of *Fahrenheit's*, or 22½ of *Reaumur's* ſcale †.

The *Maroon Negroes*, who live in the different mountains in that iſland, are active, enterpriſing, and hardy.

The inhabitants who cultivate the Coffee, and Proviſion Mountains in *Liguanea*, when they deſcend to the plains, have the looks of newly-arrived Europeans.

The troops that are ſtationed in the iſland, ſhould have barracks in theſe cool mountains, where they might uſe exerciſe, keep their health, and live well by cultivating proviſion gardens for themſelves, as land is cheap; inſtead of their being placed in the hot lowland towns, where they can neither be made good ſoldiers nor good citizens, and where they rot and periſh from diſeaſes brought on by exceſſive heat, indolence, drunkenneſs, and debauchery.

The ſame cauſe in the year 1781, 1782, and 1783, made ſuch havoc among the French and Spaniſh troops at the *Cape* in Hiſpaniola, that they were obliged to be diſperſed about in the country, or elſe it is thought that very few of them would have been fit for ſervice, or would ever have returned to Europe. The French government, I have been informed, has ſince had

* Kingſton is in N. lat. 18°, 15′. W. long. 76°, 38′.

† *Fahrenheit's* thermometer is what is every where meant in this publication, unleſs mentioned to the contrary.

it in contemplation to erect barracks, and hofpitals for their troops in the quarter of *Dondon*, a mountainous fituation eight leagues from the *Cape*, and to remove the garrifon there, or at leaft to make it a retreat for convalefcents.

I have had many opportunities of knowing the neceffity for fome regulation of this fort in Jamaica; the good effects that would refult from it, may be judged of already, by the health of the troops that are quartered at *Stoney Hill* barracks. Then, indeed, the end and utility of troops, in that ifland, might bear fome proportion to the expence; and the good fenfe which diftinguifhes our government, would be turned to an object, not lefs interefting to œconomy than to humanity; for at prefent the troops are fent thither, only to be buried; and let it be remembered, that this mode of interring a foldier, is more coftly to his country, than a fepulchre at home would be, adorned with a monument of marble.

It is not fimply, to heat alone, except when people are openly expofed to the action of the rays of the fun, that difeafes in general owe their origin in thefe climes: and even then, the *Ictus Solis*, or *Coup de Soleil*, though productive of dangerous fevers, has feldom been known to kill any perfon fuddenly, which has been the cafe even in *Philadelphia**. I have felt equal degrees of

* I faw a man lately at *Strafbourg*, who has been infane for more than a year, in confequence of an *Ictus Solis*.

heat

heat at *Naples*, *Rome*, *Montpellier*, and alſo in *Virginia*; and experiments have ſhewn that the human frame can bear far greater degrees of heat than any climate produces, without injury: and that cold alone can be ſuſtained without deſtroying life, even when ſome of its functions have been ſuſpended for a conſiderable time.

But it is the tranſitions from one to the other, which are ſo annoying to human nature. It is theſe tranſitions between the tropics, ſmall as they are in the iſlands, that give riſe to thoſe diſeaſes that are ſo fatal to Europeans, becauſe their fibres and fluids are not qualified to ſuffer the diurnal revolutions in the frame, from the various impreſſions of the atmoſphere, as condenſed, or rarefied, by the abſence or preſence of the ſun; as brought from the ſea by day, or loaded with damp and frigorific particles from the land by night.

Beſides, living in a hot ſteam as it were, their bodies are filled with it: and the turgidneſs and firmneſs of the capillary veſſels of newly-arrived Europeans, require ſome time to render them ſufficiently pervious, to let out the inflamed and rarefied parts of their rich blood by the pores, faſt enough to cool it, and bring it down to a ſtate ſuitable to the climate, for the purpoſes of the well-being of the body: from whence they are ſubject to inflammatory diſeaſes of the moſt violent kind, upon the ſlighteſt check to perſpiration.

It

It is true that the thermometer has ſhewn much higher degrees of heat without the tropics, and that greater tranſitions from heat to cold happen on certain days in many countries, and particularly on the continent of North America, than ever happen between the tropics.—In Rome, on the 3d of October laſt, the thermometer, at ſix o'clock in the morning, was at 75; and on the following morning, at the ſame hour, it was down at 55. This difference was occaſioned by a torrent of rain that fell, for there was no change in the wind; that being on both days from the South. Such tranſitions never happen between the tropics.

When I was at *Lauſanne*, the candid and liberal TISSOT told me, that the tranſitions from heat to cold, are there ſometimes ſo great, by ſudden changes of the wind from *Mont Jura*, that invalids and convaleſcents feel conſiderable ill effects from them: and that in pulmonic diſorders, thoſe changes have produced the moſt dangerous conſequences.

Sudden changes and tranſitions in every climate, are prejudicial to the human frame. In temperate climates, their influence is exerted chiefly on the weak and relaxed.—An Eaſtern wind in England, is perceived by invalids in their very beds.

An hot and moiſt *Sirocco* wind, immediately ſucceeding a cold dry *Tramontana*, in ſome ſituations in Italy; the cold ſharp *Miſtraou*, and *Biſe*, in many parts of the South

South of France, and in the neighbourhood of the Alps, have deſtroyed a multitude of people, who have been injudiciouſly placed, or careleſsly expoſed, when ſent to thoſe countries, from other parts of Europe, for their health.

The thoughtleſs cuſtom in England, of ſending ſick people to thoſe countries, from their friends and families, annually receives the tribute of many lives, from theſe and ſimilar cauſes. Towns within the reach of winds from the Alps, Apennines, and other high mountains, at ſome ſeaſons of the year, are graves to people who reſort to them, in decays of the lungs. For ſuch ſcrophulous and conſumptive habits as are endemics of our atmoſphere, ſea voyages ſhould be made, and iſlands ſhould be reſorted to, where the climate is uniformly warm; ſuch as *Madeira*: or others in ſtill warmer latitudes, which I have known to ſucceed better.

There are but few diſeaſes that originate in England, in which the climate of England, with change of place, and horſe-back exerciſe, is not equal to any other. Foreigners have an erroneous notion of the climate of England. Perhaps our atmoſphere is not mild enough for the tender fibres of weak bodies: and for broken conſtitutions where a decompoſition of the frame has begun to take place.—But, take it for all in all, the climate of England is the beſt on the habitable globe. —For by what compariſon is a climate to be eſtimated, which produces ſuch a race of people

as

as the English, and in which almost every species of animal arrives to the utmost perfection?

In America, though natural transitions are prejudicial, yet the Indians find artificial transitions otherwise. Their remedy for a cold, fever, ague, or rheumatism, is to sweat themselves severely in their sweating stoves, or ovens, for some time, and then to plunge, while sweating, immediately into a river, or cold-water, even in the depth of winter. This is also a practice in *Finland* and *Russia*. The Indians in the hotter climates, bury themselves in the hot sand to sweat themselves, and then plunge into cold water.

To supply the surface of the body with energy to carry on the important office of perspiration, nature has established a greater circulation towards the skin, in hot climates, than is necessary in cold climates.

Thus the internal parts of people who have lived long in hot climates, are drained, and lose much of their natural heat and susceptibility. They nauseate insipid things, and can bear the greatest internal stimulus without inconveniency. Hence arises the strong desire for salted meats, and also for peppers, and spices, with which nature has bountifully supplied these climes.

From the great relaxation and debility of the nervous system in tropical climates, the most trivial change of the air, which makes but a small variation in the thermometer, is productive of such a sensation of cold, or heat,

heat, as is no more to be accounted for by the operation of thoſe powers on the thermometer, than the influence of the moon: and there is not vigour enough in the extreme fibres and veſſels, to reſiſt and overcome the ſmalleſt oppreſſion of their functions. If the heat of the air ſhould ſink to 72, and remain ſtationary for a day, in places where the medium is 80, it produces an aguiſh, or chilly ſenſation, that is hardly to be deſcribed. In the habitable mountains, where the air is ſcarcely ever ſo cool as what is called temperate in Europe, people who go there ſuddenly from the low lands, find the coldneſs at firſt hardly ſupportable: and that intolerable coldneſs which is felt on the *Blue Mountains*, the higheſt land in Jamaica, is but the effect of the ſuddenneſs of the change from the ſcorching heat below; for the thermometer has never been known to be lower there than 42: and that even at night, during a North wind, in the month of February. In the following morning by twelve o'clock it roſe to 68. A variation ſo great never happens upon the ſame ſpot upon the plains, nor upon the ocean, between the tropics.

The leaſt change in the wind alſo to the Weſt, or South, from the Eaſtern points, from whence, by its conſtantly blowing, the body becomes naturalized to it, though there ſhall be no difference found by the thermometer whatever, is inſtantly felt, with lan-

guid and feverish impressions: similar to those produced by the *Sirocco* winds in Italy.

In this state of body, heat, which has destroyed the tone of the nerves, and graduated the fluids to its own standard, is necessary for existence; but it must be uniform: and one of the reasons that the rains are so fatal between the tropics is, that they increase both the heat of the day, and the coldness of the night, and make more variety in the atmosphere then, than there is at any other time.

Heat and moisture, uninterrupted, are not the cause of so much mischief as is attributed to them; for they carry a powerful remedy with them, which is perspiration. The mischief they produce is, that they dispose the body to the slightest impressions from cold; and, however paradoxical it may appear, cold is the cause of almost all the diseases in hot climates, to which climate alone is accessary.

Diseases of climate must ever remain; but there is no climate in which some diseases are not acquired that might be avoided; and there is no climate in which so much care and circumspection is required to secure the body from diseases, and where diseases are so violent and rapid, as that which is the subject of the present consideration.

The ridiculous notion that people are to die of putrid diseases in hot climates, unless they keep up their spirits, and embalm their bodies, by the assistance of wine, strong liquors,

quors, and good living, as it is called, has caufed the death of thoufands.

Another almoft equally pernicious practice, from the fame notion of putrefaction, among new-comers, is, to devour great quantities of fruit, and to drench themfelves with acid drinks: but if they efcape a flux, they deftroy the tone of the ftomach, and are foon left without either appetite or digeftion.

Some people heat themfelves by too much exertion, or by violent exercife in the fun: and, when heated, expofe themfelves to get haftily cooled. Others expofe themfelves to rain, or walk in wet grafs; or fit long in the night air; thefe are caufes of great mifchief.

Feftivity, the refource of men; and dancing, the refource of women, are cuftoms much practifed in the Weft-Indies: and Hofpitality, which there knows no bounds, fometimes makes her kind offices and amufements dangerous to her friends. New-comers have no bufinefs at feafts nor balls.

There is, in the inhabitants of hot climates, unlefs prefent ficknefs has an abfolute control over the body, a promptitude and bias to pleafure, and an alienation from ferious thought and deep reflection. The brilliancy of the fkies, and the levity of the atmofphere, confpire to influence the nerves againft philofophy and her frigid tenets, and forbid their practice among the children of the fun.

The

The means of preventing diseases in hot climates, are founded on the same principles as the means of preventing them in every other climate are. The theme has been much worn by divines, philosophers, and physicians.

If *Temperance* had not so many powerful adversaries to contend with, in the numerous relatives to sensuality, every person would be healthy. The young would be so from present, and the old from past, observance. But there seems to be such a variety of claims in the body, each nerve contending for its portion of pleasure, that reason is often lost in the conflict, and driven from her throne by the anarchy of passions.

By keeping the body quiet, and cool within, as well as without, the first object of seasoning in hot climates will be attained; which is, to moderate the action of the solids, and to diminish the volume and density of the fluids. Thus the *Serum* of the blood is neither heated, nor rendered acrid: less thirst is excited, and also less perspiration; by which means both the risque and the danger of checking perspiration suddenly, are obviated.

Living in a house with lofty and spacious rooms, in a dry situation; never sitting down, or remaining in a current of air, with wet linen on, or when much heated; nor suffering the body to cool suddenly, by unbuttoning or throwing off the coat, or any other part of the dress; never to go

out when it rains, and if by accident overtaken in it, to get as ſoon as poſſible to bed, and remain there an hour or two, firſt putting the feet in warm water, and drinking a baſon or two of warm tea; purſuing ſome amuſement in vacant hours from buſineſs, that is not fatiguing, and that does not agitate the mind; going to bed, and riſing, at early hours; taking much reſt, for that is neceſſary; ſleeping as coolly as poſſible, but never upon a ground floor; uſing gentle exerciſe early in the morning; drinking but little wine, and that Claret or Madeira, but no ſpirituous liquors, nor punch, for acids are, in the end, deſtruction to the ſtomach: eating light food of eaſy digeſtion, roaſted in preference to boiled, and of whatever ſort beſt agrees with the ſtomach (for thoſe countries have great variety of luxuries, as well as neceſſaries of life): uſing but little butter; vegetables well boiled; fruit ſparingly; tea or coffee for breakfaſt; avoiding ſuppers: with now and then taking a doſe of ſalts, and making that day, a day of abſtinence,—are the beſt cautions, and precepts for health, that I can give.

I dare not recommend cold bathing; it is death with intemperance, and dangerous where there is any fault in the viſcera. It is a luxury denied to almoſt all beſides the ſober and abſtemious females, who well know the delight and advantage of it. Indiſcriminate bathing has been fatal to ſeveral men whom I remember, that uſed it, to

add

add pungency to the appetite of voluptuousness. People must be temperate in their way of living, and free from obstructions in the viscera, that bathe. Therefore I believe it will not accord with either the habits or situation of many.

When I recommend the drinking nothing but *water* in hot climates, as the most certain insurance of health, I expect to have but few disciples to embrace my doctrine, especially among those that have most need of it;—who are, such as have broken down their constitutions by intemperance at home. But I aver, from my own knowledge, and custom for several years, as well as from the custom and observations of many other people, that those who drink nothing but water, are but little affected by the climate, and can undergo the greatest fatigue without inconvenience. There are habits of body to which water-drinking may be objectionable, but that can scarcely ever happen among young people, and those of a plethoric, or of an inflammatory tendency.

Whatever mode of living may be proper after people have lived long in hot climates, and when, perhaps, by having been frequently diseased, the inflammatory diathesis of the body is past, while it remains (as it will with some people for many years), those who use water for their common drink, will never be subject to troublesome, nor dangerous diseases. The greatest inconvenience I know, attending water-drinkers, is, that

their appetite is generally ſo keen, that they often eat more than they ought.---An occaſional oppreſſion at the ſtomach thus created, is beſt relieved by three grains of *Aloes*, or a few grains of *Rufus*'s pill, where thoſe medicines are not exceptionable, made into a pill, and taken at bed-time.

The gratefulneſs of cool liquors in hot climates, is among the firſt ſenſations of luxury. A glaſs of water, or wine, that has been much cooled, produces a very different effect on the ſtomach, as well as on the palate, to what either do in an equal ſtate of heat with the atmoſphere. A late diſcovery for generating ice, from an artificial frigorific compoſition, will be of great benefit in tropical countries: as there is no place ſo ſituated, where this compoſition will not afford as much inſtantaneous refrigeration as can be required, either for the purpoſe of medicine, or for the luxury of the table.---The preparation is as follows:---Take Oil of Vitriol, and Water, of each an equal weight; or by meaſure 1 and 4-5ths of Water, to 1 of Oil of Vitriol. Mix theſe together, by adding the Oil by degrees. Let this mixture, which will be very hot, ſtand until it is cold: and after it has been ſo for ſeveral hours, or longer,---take fourteen ounces of it, and diſſolve in it ſixteen ounces of Glauber's ſalt powdered:---add the ſalt by degrees, and ſtir it, until it is diſſolved. This quantity will ſerve to cool one bottle of any liquor, at a time, and the ſame propor-

tion

tion is to be obſerved for any other purpoſe. The ſalt muſt be kept from the air, before, as well as after it is powdered, that is intended for this ſolution :---for when it has acquired that white appearance which Glauber's ſalt will do by long keeping, and by being expoſed to the air, it is unfit for this proceſs. The ſolution of the ſalt ſhould be made in a thin glaſs jar, and whatever is intended to be cooled by it, is to be put into it, in another thin veſſel. It may be made in an earthen or wooden veſſel, but the thickneſs of theſe veſſels diminiſhes the coldneſs of the ſolution. This ſolution, made in the moſt accurate manner, has ſunk the thermometer from 62 to 10, a reduction of 52 degrees. When a great degree of refrigeration, or congelation, is required, it is neceſſary to make two, or more, ſolutions, and put one in a very thin tin, or glaſs veſſel, into another. But in a common way of making it, and in almoſt any veſſel, it will reduce the thermometer forty degrees; and will be ſome hours before it returns to the heat of the atmoſphere, where the coldneſs is not taken often, by the refrigeration of bodies, immerſed in it. But the greateſt degree of coldneſs is at the firſt inſtant the ſalt is diſſolved.

Though there is abundance of excellent water in moſt of the Weſt-Indian iſlands, particularly in Jamaica, in which there are alſo ſprings of powerfully hot ſulphureous, and cold chalybeate waters, yet for the

common purpofes of life, it is an article of too much confequence to health, not to merit the greateft attention in the choice of it, in refpect to its purenefs from any vegetable, metallic, or faline property; and its tranfparency and levity, from not being loaded with terrene matter.

Mineral and brackifh waters may eafily be diftinguifhed by the tafte: and water that is fo fituated as to receive the leaves of trees, and vegetables, unlefs it be in a very rapid ftream, fhould never be ufed.

Individuals are not fo likely to be diftreffed, as navies and armies; to which great mifery has often arifen on this account.

Voyages and expeditions, in different parts of the world, are full of recitals of this fort. The people, during the fiege of ORMUS, in 1622, according to MONOXE's Journal, were terribly afflicted with the bloody flux, from drinking brackifh water *. And the *Earl of Cumberland* loft fix hundred men out of the thoufand which he landed at *Puerto Rico*, in 1597, by the fame difeafe, and principally, it is faid, from the fame caufe, between the 6th of June, when they landed, and the 14th of Auguft, when the furvivors departed from the ifland. *Port Louis*, in the Ifle of France, has been feveral times nearly depopulated by the bloody flux, before the great river water was

* Purchas.

brought down there; and in all the colonies, both in the Eaſt and Weſt-Indies, there are towns which ſuffer great inconvenience from their founders not having duly conſidered the importance of good water, before they began to fix their habitations.

The Engliſh drink more wine and ſpirits than the French; the French more than the Spaniards; and we calculate the mortality of each, by this rule. The Spaniards live to great ages in the plains of *St. Jacques*, *Cotuy*, and *Beque*, in Saint Domingo, partly from the ſalubrity of the air, but chiefly from their ſobriety.

Our troops in the Weſt-Indies are killed by drinking new raw rum; and ſo are the lower order of mechanics, and white people on the plantations.

The conſequence of drinking rum and water, or *Grog*, as it is called, is, that habit increaſes the deſire of more ſpirit, as it decreaſes its effects; and there are very few grog-drinkers who long ſurvive the practice of debauching with it, without downright ſtupidity and impotency.

Rum and water is an wholeſome beverage, and when taken in moderation, and made very weak of rum, it is perhaps, for laborious people, the beſt liquor to quench their thirſt with; for rum is a great corrector of water, and a promoter of perſpiration. But the exceſs of the proportion of the rum to

the water ſhould be guarded againſt, by thoſe who intend to preſerve their health, with the utmoſt watchfulneſs. A man who is determined, either by choice or neceſſity, to drink rum and water, ſhould keep a jealous eye on his meaſure: that once violated, his palate becomes vitiated; and if reaſon is not exerted to prevent, it will ſeldom be found equal to the taſk of correcting an habit, eſtabliſhed on the ruins of fortitude.

Soldiers collect their rations of rum, or ſell their proviſions to buy it, until they have got a ſufficient quantity to debauch with. If they drank in a regular manner, and well diluted with water, the quantity of rum allowed them, and no more, and that of good quality, it would do them no injury: but this is not the caſe, nor ever can be in the Weſt-Indies, while they are quartered in towns.

The Creole ladies of the iſlands ſeldom drink any thing but water. This they carry to exceſs; and many of them require wine, which from the want of habit they cannot drink. They live, in general, as long as the inhabitants of Europe; and though they are ſubject to nervous complaints, they are ſeldom ſubject to ſuch as are dangerous; and to inflammatory diſeaſes, partial ones excepted, ſcarcely ever.

They injure their nerves by not taking ſufficient exerciſe, and by uſing too great a quantity

quantity of acids, ſalted meats, vegetables, and fruits; and this crude diet makes the neceſſity for the pernicious, and cuſtomary large addition of peppers.

Acids, in every climate, create coſtiveneſs, endanger the ſweetneſs of the breath, and are fatal to the organs of digeſtion. It is to this cauſe, principally, that I attribute the inſuperable ſourneſs in the ſtomach, the coldneſs of the ſkin, and partly, the pallidneſs of the complexion, of the inhabitants of hot climates.

The natives of the French iſlands drink ſuch quantities of lemonade, with their cold, acid, vegetable diet, that they ſometimes are ſuddenly ſeized with a total loſs of appetite, and digeſtion, which is followed by an imbecility of the whole body, from which they never recover.

HILLARY ſays, "the common ſweat, even "of perſons who are well, when taſted in "the Weſt-Indies, is ſo very ſalt and acrid, "that it taſtes like the ſalt or ſpirit of "hartſhorn mixed with water." I cannot ſay I have found this remark verified; but on the contrary, from the climate being unfavourable to animalization, the ſweat has a nearer affinity to the ſpirit of vinegar. All the fluid excretions, in habits not bilious, are impregnated with an acid acrimony; and the ſweat is ſo powerfully ſo, generally, that the rooms of ſick people ſmell like the ſteam of acid preparations; and I have al-

ways

ways obſerved, that the uſe of aromatic ſcents, and the burning of fragrant woods and herbs, were more refreſhing to the patient, and cleanſing to his chamber, than the ſprinkling of vinegar, and the uſe of acids.

The idea that every thing in hot climates inclines to putrefaction, by the alkaleſcent diſpoſition of the animal juices, while life remains, appears to me to be totally void of foundation. If bile be prone to alkaleſcence, milk, lymph, and chyle are prone to acidity, and all habits are not bilious. It is certain, that putrid fermentation is ſoon excited after death; but there are no peſtilential, nor contagious fevers, at leaſt in the iſlands: either that becauſe the air is impregnated with a ſubtile acidity drawn from the ſea in theſe iſlands, which accounts for many phænomena attributed to moiſture only*, or that it is ſo rarefied as to prevent that aggregation and condenſation of *Miaſma*, by which it cannot acquire quantity or force ſufficient to inflict diſeaſes, and is

* Sicciſſima in his locis (Java) anni tempeſtate ferrum, chalybs, æs, argentum denique, citius rubiginem et æruginem contrahunt, quam in Europa pluvioſo ac autumnali anni tempore.

BONTIUS, *Dial. Primus.*

Aër in America adeo efficax rodendo ut metalla fere omnia conſumat, ut de aëre Bermudenſi Britanni teſtantur.

BOERHAAV. *Chem. Tom. I. de Aëre.*

divided,

divided, broken, and diſperſed through the air, in impotent ſolution.---Beſides, the atmoſphere by regular winds is in conſtant agitation, and there are no calms of ſufficient duration to make any malignant exhalation ſtationary.

Much has been ſaid by writers concerning putrid fevers, and the tendency of all fevers to putrefaction, in hot climates. But ſuch opinions are not founded on practice, however they may ſeem to agree with theory. The great endemic there, is the *Nervous Remittent Fever*, which is unattended with any putrid ſymptoms, and which has its ſeat in the nervous ſyſtem; or, as I have often thought, in the brain itſelf. I ſcarcely remember to have ſeen a fever accompanied with petechial, or purple ſpots, in the Weſt-Indies; and it is very uncommon to find the parts livid, or gangrenous, where bliſters have been applied.

In all hot climates, females arrive at maturity earlier, and they alſo ſooner decay, than in cold climates. In youth, obſtruction of the menſes is more frequent, and greater inconveniences follow their temporary ſuppreſſion here than in other climates; but leſs inconveniency attends the final ceſſation of menſtruation. The ceſſation of this diſcharge, though at the advanced and natural time of life, in every climate, cauſes a revolution in the habit that is attended with danger, and conſtitutes the moſt critical

cal period of a woman's life. Bleeding, in a ſmall quantity, a few days before the accuſtomed time of the return of this evacuation, for many months, after the firſt ceſſation, is the only general remedy, for indiſpoſitions occaſioned by it, which can be adviſed.

Though females do arrive at early maturity in hot climates, there are none of thoſe wonderful inſtances of early pregnancy in the Weſt-Indies, that travellers ſpeak of, and ſuch as are ſaid to have happened in other parts of the world.

SAVONAROLA ſays, he ſaw a girl pregnant at nine years of age; JACQUES DE FORLI, one of eight years old: and DESPARS, in his comment on AVICENNA, that he ſaw a girl at *Tournay*, that at the age of nine years had already a child: many other tales of this ſort are collected by the marvellous SCHENCKIUS.

After ſuch extraordinary events, it cannot appear improbable that a young lady, as I was informed, was pregnant in the twelfth year of her age, at *Aix*, in the South of France, laſt year.

Such inſtances as even this, though uncommon in the Weſtern world, and among the ancient Lacedemonians, were not uncommon among the Athenians, Thebans and Romans. Policy, which has converted the early exerciſe of the natural paſſions to advantage in ſome ſtates, has made it diſgraceful in others.

History

Hiſtory furniſhes ſome inſtances of remarkable fœcundity in as extreme age, that are never to be met with in the Weſt-Indies. PLINY ſays, that *Cornelia*, of the houſe of the *Scipios*, brought forth a child in the ſixty-ſecond year of her age, which child was afterwards the Conſul *Voluſius Saturnius*: and that among the common people, even the age of eighty-five afforded ſuch prolific examples *.

Hot climates are indeed very favourable to geſtation and parturition. Difficult labours are not common; and children are generally born healthy and ſtrong; and thrive more than they do in temperate climes, for a few years, and are not ſubject to the ricksets, nor the ſcrophula; after which they generally get into a flaccidity of muſcle, and acquire a paleneſs that characterizes their future complexion.

Women ſoon recover from lying-in; and Indians and Negroes ſometimes make it an affair of a few days, and ſometimes of a few hours only, and then purſue their occupation.

If climate had not a conſiderable ſhare in the ſucceſs of the event, a remarkable occurrence happened within my knowledge, in which ignorance and reſolution reduced an operation, ſuppoſed of great difficulty and danger, to a ſuppoſition that there is neither difficulty nor danger attending it: at leaſt when judiciouſly performed.

* Lib. VII. cap. 14.

In

In the year 1769, a *Negro woman* belonging to Mrs. *Bland*, a midwife, at Mr. *Campbell's* graſs plantation at the *Ferry*, between *Kingſton* and *Spaniſh Town*, in Jamaica, being in labour, ſhe performed the *Cæſarian operation* on herſelf, and took her child out of the left ſide of her abdomen, by cutting boldly through into the uterus.

She performed this operation with a butcher's broken knife, about two inches and an half long, being the part joined to the handle. The poſition of the child was natural; ſhe cut through near the *linea alba*, on her left ſide, and cut into the child's right thigh, which preſented at the part, about three lines deep, and two inches and an half long. The child came out by the actions of his own ſtruggling. A Negro midwife was ſent for to her, who cut the navel chord, and freed the child, and returned the part of the navel chord adhering to the placenta, and a conſiderable portion of the inteſtines alſo, into the abdomen, which had come out at the wound with the child.

The ſurgeon who attended the plantation was ſent for, a few hours after the accident happened; and judging from the dirty ſituation in which he found her, that ſome dirt had been put into the wound, by the old midwife, with the inteſtines, he cut open the ſtitches that had been made, and carefully waſhed the part clean, extracted the placenta at the wound, and then ſtitched it up again.

On

On the third day after ſhe had recovered from her ſunk ſtate from the loſs of blood, which was conſiderable, a fever came on, which was removed by cooling medicines: ſhe then took bark for ten days. The wound was fomented and dreſſed properly, and was ſoon cured; and the woman was well in ſix weeks time from the accident, and able to go to her work.

The child died on the ſixth day, with the *jaw-falling*, as it is called, but came into the world healthy and ſtrong.

The woman continued perfectly well, menſtruated regularly, and was with child again a year or two afterwards.---She attempted the ſame operation again, but was watched and prevented, and had a regular and proper labour. She had borne three children before this affair, all with natural and eaſy births. She was an impatient and turbulent woman, whoſe violence of temper was the only cauſe aſſigned for her conduct*.

It is not uncommon, neither in the Weſt-Indies nor in Africa, to ſee white children, or white negroes, as they are called, from black parents. Mrs. Jones, in Spaniſh Town in Jamaica, had a boy, whoſe father and mother were black, that was perfectly white, with white woolly hair and grey eyes; but with lips, noſe, and ſhape intirely African.

* I wrote what relates to the accident at the time it happened.—It has already been publiſhed.

The

The white colour of the skin of people of this sort, is not like the skin of European white people, but much whiter, and without that redness distinguishable in the skin of Europeans. They are generally nyctalopian and short lived.---Another caprice of nature sometimes produces piebald children from negro women. The Reverend Mr. *Penlington*, in Jamaica, had a black woman who brought forth a party-coloured black and white child.

PLINY'S story of the *Proconnesian* slave, who having had carnal knowledge of her master, and his steward, on the same day, and became pregnant by both of them, and brought forth two children resembling their respective fathers, nor the story of the adulteress mentioned by ARISTOTLE, are neither of them so curious, nor so decisive an instance of Ἐπικύησις, or superfœtation, as one that happened at *Shortwood* estate, in Liguanea in Jamaica, some years ago. A Negro woman brought forth two children at a birth, both of equal size, one of which was a *black*, and the other a *mulatto*. On being interrogated upon the occasion of their dissimilitude, she said she perfectly well knew the cause of it; which was, that a white man, belonging to the estate, came into her hut one morning before she was up, and she suffered his embraces almost instantly after her black husband had quitted her.

In the anatomical theatre at Leyden two skeletons are preserved which I saw a few years ago. They are said to be the bones of twins

twins differing remarkably in colour, which a burgo-maſter's wife brought into the world, in the time of ALBINUS. What cauſe produced their diſſimilitude I cannot tell.

European animals in general degenerate in the Weſt-Indies; and as they deſcend in a few generations, retain but little reſemblance of their original ſtock. How far this extends to the human race, as relative to natural endowments, is a ſubject of nice inquiry, and foreign to my preſent purſuit. However, if any inferiority is found at all, it does not appear in the firſt generation, or in thoſe born immediately of European parents. But on the contrary, if my obſervation is juſt, in people of this deſcription there is equal capacity and ſtability of mind, with more acumen and intellectual refinement, than in thoſe born in Europe. Whether this diminiſhes or not, in further removes, without European mixture, abſtracted from the influence of habit and education, may admit of ſpeculation. But let the change be how or what it may, I have never obſerved any declenſion in the qualities of the heart, nor in the tendency of the mind, that philoſophy could fairly attribute to nature. The women are generous, affectionate, induſtrious, and virtuous. The men are brave, polite, and ingenious, and have a peculiar turn for

the acquirement of belles lettres, and the elements of arts, that are not laborious.

Indolence muſt prevail, where climate relaxes the muſcular fibres, and debilitates the nerves. European dogs loſe their ſcent, horſes their ſpeed, and human beings of delicate ſtructure, and fine feelings, ſink into a weariſome exiſtence, deprived of power and inclination to move. But there are different caſts of human beings, as well as of other animals. Men generated from the coarſer materials of northern melancholic matter, who on their native ſoil were intended to vegetate, labour, and die, often acquire an expanſion of ſoul, removed to warmer climes. They ripen in the ſun.---They get ideas in ſpite of nature. It is not uncommon, between the tropics, to ſee contention for precedency, duel from punctilio, and the laws of honour obſtinately inſiſted on, by men, who but a few years before were imported from Europe to fulfil ſome ſervile office, in which they acted with ignorance and integrity, until the ſun had ſublimed their ſtupidity, and diſſolved their principles.

Idiotiſm

Idiotiſm is unknown in the Weſt-Indies.

The reverſe of what is ſuppoſed to happen to the European, attends the African race. Every generation here, is an improvement on the former. That wild chaos of inſtinctive notions, which negroes bring from Africa, ſeldom can be modulated, unleſs they come from it very young, to bear any durable, rational impreſſion. When this happens, they look back with horror on their ſavage ſtate; and do not eaſily forgive, unleſs ſome compliment is added on their improvements, the reproach of having been born in Africa, and of ever having lived in a ſtate that nature intended for them.

If the natives in the iſlands were not naturally inclined to temperance, which they are in an eminent degree, the drunkenneſs of the ſlaves, with its cadaverous effects in their aſpects, and the ſhocking pollution of their manners, would render the vice of intoxication ſo odious, that pride would revolt at a practice ſo debaſing to both body and mind. Here are exam-

ples that would have deterred the Spartan youth, without any trouble to their parents.

People are ſeldom afflicted with *Conſumptions of the Lungs*, in tropical countries; *Lunacy*, or *Mania*, are very uncommon; *Scurvy*, or *Gravel*, are diſeaſes ſeldom to be met with; and the *Stone* ſcarcely ever.

I have known many Europeans, ſubject to the gravel at home, who had no ſymptoms of it during their reſidence in the Weſt-Indies.

An amiable and worthy officer, of the 79th regiment, had been ſo afflicted by a ſtone in his bladder for many years, that he was at length obliged to remain in England, with the intention of having it extracted. Mr. POTT determined his diſeaſe to be the ſtone, on examination; the ſound of the inſtrument was heard by ſeveral people, who were preſent at the examination. His regiment being at Jamaica during the war, ill as he was, he ſpiritedly reſolved

to join it, as great mortality had happened among the officers. Soon after his arrival at Jamaica, which was in 1780, all the ſymptoms of his former painful diſeaſe abated. He remained in Jamaica three years, and had no violent return of them; but, on the contrary, they gradually diminiſhed, until it became doubtful whether there was a ſtone in the bladder, or not. He has ſince been in *Canada* for two years, and had none of his complaint there; he is now in England, and is entirely free from it.

When all precaution to guard againſt ſickneſs has failed, and prudence proved abortive to new-comers, they will have this comfort at leaſt, for their pains, that their diſorders will ſeldom be ſevere, or expenſive, and will generally have a ſpeedy termination; and that their *Seaſoning*, as it is emphatically called, will be removed by bleeding, a doſe of ſalts, reſt, and a cooling regimen.

Where this mild compoſition for future health has not been merited, and no terms

have been made with the climate, violent diſeaſes may be expected; among which the DYSENTERY, particularly with ſoldiers and ſailors, or an INFLAMMATORY FEVER, perhaps to that degree which has the appellation of the YELLOW FEVER, may be looked for.

I cannot diſmiſs the preſent ſubject, in which my views have been principally directed to the avoidable, and to the remediable derangements of the body, without one ſolitary glance at thoſe derangements of the mind, which no regimen can prevent, nor medicine cure.

Hot climates adminiſter certain death to a "mind diſeaſed;" and where there is in the "memory a rooted ſorrow," or "written troubles of the brain." The want of ſleep in the ſlighteſt indiſpoſition, is always alarming; and in the graver diſeaſes, of people who have naturally much irritability of habit, or ſome grief, or anxiety in the mind, it is the cauſe of ſo great a determination of blood to the head, with

excessive action of the arteries of the brain, and so much perturbation of the animal spirits, that often admit of no relief nor composure, but what the unhappy sufferer, after violent convulsive struggles, phrenzy, and inflammation of the brain, finds in death.

Sometimes indeed he escapes this fate, to experience the miserable alternative, of a long imbecility of the faculties of the mind.

Therefore, let not the discontented in mind, nor the broken hearted, hope to evade his cares and troubles, by changing to these climes; nor think that any passion which has stormed the breast, will abate its force by distance.—*Nostalgia*,—that longing after home, exerts its painful influence in the remotest regions, and magnifies to danger, the most trivial indisposition of either body or mind, when both are already half subdued by the heat and dread of climate. Those whose happy days have not yet been clouded with

misfortunes, let them be careful here, to preserve tranquillity of mind, and watch with caution over their passions.---The young and inexperienced, who have embarked with the false notion, that fortune has heaped up treasure for them, to be delivered out gratis, let them also prepare for disappointment: and let them avoid, at first arriving in these countries, entering into any serious engagement, or intricate concern, until they have made themselves acquainted with the genius of the people, and their local laws; for fear any glittering allurement should lead them into an inextricable labyrinth of difficulty and vexation, and consign them to "that "country, from whose bourne no traveller "returns."

ON

ON

MILITARY OPERATIONS

IN THE

WEST-INDIES.

SECT. I.

THE early part of the Weſt-Indian hiſtory is filled with melancholy relations of military diſaſters, ariſing from ignorance of the periodical changes, which the ſeaſons undergo in tropical countries. Yet it is ſtrange that theſe woful events,

events, numerous as they have been, have ſerved for very little more, than as a theme for public commentary, and private lamentation.

Currents, in various parts of the ocean, have been anxiouſly explored by navigators; but the effects of the various ſeaſons in different latitudes, characteriſtic of each climate, and their difference from local circumſtances in ſimilar latitudes, have never been attended to by philoſophers, nor regarded in practice, but by thoſe who have ſuffered from their influence.

In commercial voyages, neceſſity muſt be ſubmitted to; but in military expeditions, where the choice of time and ſeaſon is within the will of the directors of the enterprize, it is wonderful that they ſhould ever be ſo choſen, as to defeat the very intentions of the undertaking.

The ruin of the forces with VERNON, and

and with them, the expedition, from the rainy ſeaſon in 1741 at *Carthagena*; and the unhappy HOSIER's unparalleled ſtory in 1726, before the *Baſtimentos* at *Porto-Bello*, with ſeveral leſs momentous diſaſters of the ſame nature, have not operated like misfortunes, to deter by their example. The former national concern, in which twenty thouſand lives were loſt, is more remembered from the flagitious enmity and jealouſy between the commanders (circumſtances notoriouſly diſgraceful to this country in every war), and the latter, from the political treachery which expoſed that miſerable fleet to deſtruction, than from the natural cauſe, which in both inſtances made the crimes of individuals ſo expenſive to the nation, and ſo calamitous to private families, by the loſs of ſo many of their deareſt friends and relations.

In the beginning of the year 1780, an expedition was begun from Jamaica,

againſt the Spaniſh territories in America.

This expedition was directed by GENERAL DALLING, at that time Governor of Jamaica. The plan, wherever it originated, was judiciouſly deſigned, and highly approved by Lord George Germain, then Secretary of State for the American department.

The intent was to cut off the communication of the Spaniards, between their Northern and Southern American dominions, by *El Rio San Juan*, or, *the River Saint John*, as it is called by us, and the lake *Nicaragua*; from the interior boundary of which to the South ſea, is only four or five leagues, through a level country. Thus a connection from the North, to the South ſea, was to have been kept up by us, a chain of poſts was to have been eſtabliſhed, and a communication opened, and protected, with an extenſive coaſt, and all the richeſt provinces of South America.

Every

Every perſon acquainted with the geography of the Spaniſh territories, and of the defenceleſs ſtate of this approach to them, and of the inſurrections that then had actually taken place in *Santa Fé*, *Popayan*, and many parts of *Peru*, formed the moſt ſanguine expectations. Happy was every man who had hopes of bearing any part in the enterpriſe. Enthuſiaſm never was carried to greater height, than by thoſe who had promiſed to themſelves the glory of ſhaking Spain to her foundation. The colours of England were, in their imagination, already even on the walls of *Lima*.

And ſo indeed they might have been, had GENERAL DALLING met with no obſtacles in arranging the buſineſs in Jamaica, and had there been no delay in ſending out the force from England, which did not arrive until Auguſt, when it ought to have been on the Spaniſh main in January.

Here was the origin of the failure; but even

even this perplexity and diſappointment would not have defeated the expedition, or at leaſt the Spaniards might have been ſaddled with the expence of it, if we could only have made a lodgment on the *Lake*, to have kept open the river, which might have been done, had the firſt detachment that GENERAL DALLING ſent, been able to have taken *San Juan* Caſtle in two hours, inſtead of ſetting down formally before it for eleven days.

The firſt detachment, conſiſting of about two hundred men, from the 60th and 79th regiments; one hundred of the Loyal Iriſh Corps, and two hundred Jamaican Volunteers, left Jamaica under the convoy of the Hinchinbrooke, a ſloop of war, on the 3d of February, 1780, and directed their courſe to the Muſquito ſhore, to take with them ſome of the Muſquito Indians*, who were waiting for their arrival.

" * The *Muſquito Indians*, properly ſo called, and who have been ſo juſtly remarkable for their fixed hereditary hatred of the Spaniards, and attachment to us, were

rival. On the 14th of February they arrived at Cape *Gratias à Dios*, disembark-ed,

were formerly very numerous; but they were much reduced some years ago by the small-pox. Their present number is from seven to ten thousand fighting men; formed into different tribes, both by nature and policy. By nature, from the general distinction of *pure Indians*, and *Samboes*; by policy, as living and acting under several chieftains, called King, Governor, General, and Admiral; each of whom has a different territory, and nearly independent jurisdiction; though the King has an imperfectly defined supremacy both in power and dominion.

"The General's people are Samboes, and inhabit from *Black River* to near *Cape Gratias à Dios*. The King's chief residence is about twelve leagues South of the Cape; his people are also Samboes, and his immediate precinct reaches to the Cape, and runs far up the country. The Governor's precinct joins to the King's, and extends between twenty and thirty leagues to the Southward, till it meets the Admiral's. The people under these two last chieftains are pure Indians.

"The *Samboes* are supposed to derive their origin from a Guinea ship, in which were several hundreds of Negroes, being wrecked on the coast above a century ago. Certain it is, that their hair, complexion, features, and make, clearly prove an African ancestry; from which they have also inherited some of the worst charac-

ed, and encamped about a mile from the ſea, on *Wank's Savanna*, an unhealthy ſituation. Here they were joined by a party of men from the 79th regiment, from *Black River*. On the 10th of March the troops re-embarked, and took their departure from Cape *Gratias à Dios*, and anchored at ſeveral places on the Muſquito ſhore, to take up our allies, the Indians, who were to furniſh proper boats for the ſervice of the river, and to proceed with them on the expedition:

characteriſtics of the worſt African mind: for they are generally falſe, deſigning, treacherous, impudent, and revengeful.

"The *pure Indians*, are the Aborigines, but ſo called becauſe they are free from any mixture of Negro blood; and their general conduct gives a very favourable idea of Indian nature. They are ſeldom guilty of any poſitive evil, and often riſe to poſitive good, when poſitive good does not require much exertion of the mind. Their modeſty, docility, good faith, diſpoſition to friendſhip, and gratitude, ought to engage the regard and protection of all mankind; for the ſame virtues that render them amiable, will be likely hereafter to bring on their deſtruction."

Bryan Edwards, Eſq.

dition: and on the 24th of March they arrived at the mouth of the river *San Juan.*

San Juan river, is the Northern branch, or mouth, of *Lake Nicaragua*, and is situated in North latitude 12°, 0′, West longitude 83°, 45′.

The heat of the climate must necessarily be excessive; and this is augmented, in the course of the river, by high woods, without sufficient intervals, in many places, to admit of being refreshed by the winds.

The river has in its course many noisome marshes on its sides; and the trees are so thick as to intercept the rays of the sun: consequently, the earth beneath their branches is covered with rotten leaves and putrid vegetables. From hence arise copious collections of foul vapours, which clog the atmosphere. These unite with large clouds, and precipitate in rains: the rains are no sooner

over than the ſun breaks forth, and ſhines with ſcorching heat. The ſurface of the ground, in places not covered with trees, is ſcarcely dry, before the atmo-ſphere is again loaded by another collec-tion of clouds and exhalations, and the ſun is again concealed.

In the rainy ſeaſons of the year, months ſucceſſively paſs away in this ſort of vi-ciſſitude, without the leaſt diminution of heat, except at nights, when the air is poi-ſoned by noxious, chilling dews. But ſome-times, during the *Periodical Rains* *, which begin about the middle of April, and with uncertain intervals of dry weather, end late in November, the torrents of water that fall, for weeks together, are prodigious, which give the river a tre-mendous aſpect: and from their ſudden-neſs and impetuoſity, cannot be imagined by an European to portend any thing but a deluge. This burſting of the wa-ters above, and the raging of the river

* Vide page 7.

below,

below, with the blackneſs of the nights, accompanied with horrible tempeſts of lightning and thunder, conſtitute a magnificent ſcene of terror, unknown but in the Weſtern world.

Theſe circumſtances are not peculiar to this diſtrict, but are common to all the interior parts about *Carthagena*, *Porto Bello*, *Chagre*, the *Spaniſh Main*, and the *Muſquito ſhore*.

The amazing quantity of water that falls on the North, and Eaſt ſides of the *Cordelleras* and *Andes*, is evident from the immenſe rivers that empty themſelves into the Northern ocean, from the river *Amazon* to the river *Miſſiſippi*: and the great dryneſs of the countries on the oppoſite ſide of thoſe mountains is alſo evident, from the ſmallneſs of the rivers that empty themſelves into the Southern ocean.

In the kingdom of Peru, on the South of the Equator, though there are great fogs, and thick miſts, or *garuas*, as they

are called, during their Winter, which is from the latter end of June until the beginning of December, it never rains along the coaſt, within fifteen or twenty leagues of the ſea.

Of the little army deſtined for the *San Juan* expedition, after ſome delay at the mouth of the river, two hundred regulars, with ammunition and ſtores, proceeded up the river, with the Indians, in their ſeveral crafts. It being now near the end of the dry ſeaſon, the river contained very little water, and the ſhoals and ſandy beaches rendered the paſſage difficult. The men were frequently obliged to quit their boats, and unite their exertions to get them through ſome ſhallow channels. This labour continued for ſeveral days after they left the mouth of the river, until they arrived in deeper water:—then they made a quicker progreſs. However they met with many obſtacles by currents, and occaſional rapids, or falls, which would have been inſurmountable but for the ſkill of the Indians in managing the boats on thoſe occaſions.

On

On the 9th of April this advanced party arrived at a little iſland up the river, called Saint Bartholomew, which they took, after receiving a few ſhots from the enemy, by which two men were wounded. This iſland was occupied by the Spaniards as a look-out, and was defended by ſixteen or eighteen men, in a ſmall ſemicircular battery, of nine or ten ſwivels.

On the 11th of April the troops arrived before the caſtle of *San Juan*, and on the 13th the ſiege commenced. The ammunition and ſtores were landed two or three miles below the caſtle, and tranſported through the back woods to the place where the attack began.

San Juan Caſtle is ſituated ſixty-nine miles up the river, from the mouth, and thirty-two miles from the lake of *Nicaragua*, and is a navigation of nine days, but for loaded boats much longer, from the harbour up to it. The return from it down by the current, is made in a day and half.

On the 24th of April the caſtle ſurrendered.

dered. During the ſiege two or three men were killed, and nine or ten wounded.

But here the tragedy begins: and the beſt concerted and moſt important enterprize that had been conceived during the war, was totally defeated, and a conſiderable national expence and mortality incurred, only to increaſe the jealouſy of the Spaniards, and their inſolence to our countrymen, which has ever been without example among civilized nations.

From the unfortunate delay before the caſtle, which ſurrendered when it was ſummoned, the ſeaſon for the Spring periodical rains, and their concomitant diſeaſes, was now advanced; and the little army had loſt the opportunity of puſhing rapidly on, out of thoſe horrid woods *, by

* In theſe woods there are a multitude of antelopes, monkies, parrots, tygers, and deadly venomous ſerpents.

In the march to the caſtle, as an advanced party under the command of *Captain Bulkeley*, an officer of diſtinguiſhed merit, of the 79th regiment (to whom I am indebted

by which they were now environed, to the dry, pleaſant, and healthful plains, and agreeable towns of *Grenada* and *Leon*,

indebted for this, and many particulars of the expedition), one evening were making fires, and preparing to refreſh and reſt themſelves, a ſoldier having retired a little way from the reſt, a tyger came behind him and ſtruck him on the back with his paw, and jumped on him. The man inſtantly ſtarted up, diſentangled himſelf, and ran to his companions, frightened almoſt to death, with the tyger after him. The man fell down, and the tyger plunged headlong amongſt the men, miſſed the one he was purſuing, and catched another by the neck, tore his clothes, and hurt his face; but, without doing any farther miſchief, and from the noiſe and confuſion of the whole party, he fled away. From theſe he ran to a party of Indians who were accompanying them, and were now reſting at ſome little diſtance: but the Indians ſeeing him approach, made a great howling, which is always their cuſtom, and frightened the tyger away. He muſt have been much preſſed with hunger, not being firſt attacked, to purſue a man where there were fires, and a multitude of people.

In this march alſo, another man of the 79th regiment, was bitten by a ſerpent hanging from the bough of a tree, under the orbit of his left eye; from which he inſtantly felt ſo much pain that he was unable to proceed. He died in a few hours, with his body conſiderably ſwelled, and of a deep yellow colour. The eye near the bite was intirely diſſolved.

near the lake, in the province of Nicaragua, which from its ſalubrity and ſituation is juſtly termed by the Spaniards, *Mahomet's Paradiſe*; and where they might have maintained themſelves, with the reinforcement which followed them, until the ſeaſons would have permitted further reinforcement, and the completion of a glorious enterprize;—for the natives of the country were ready to revolt, and waited but for a proſpect of ſucceſs. But here they were ſhut up in the caſtle, as ſoon as they were in poſſeſſion of it; and here the troops and Indians were attacked with fluxes and intermittents; in want of almoſt every neceſſary, though the expedition was amply provided for by *General Dalling*; but the river was become ſo ſwoln and rapid by the rains, that the navigation from the harbour, where the proviſions and ſtores were, was tedious, and almoſt impracticable. Here the troops, deſerted by thoſe Indians who had not already periſhed, languiſhed in the extremeſt miſery, and gradually mouldered away, until there was not ſufficient

ſtrength

ſtrength alive to attend the ſick, nor ſick to bury the dead.

Thus reduced, in the month of September they were obliged to abandon their flattering conqueſt, and return to the harbour, leaving a few men behind who were the moſt likely to live, to keep poſſeſſion of the caſtle, if poſſible, until further orders ſhould be received from Jamaica.

The Spaniards retook the caſtle as ſoon as the ſeaſon permitted, and with it, thoſe who had not ſtrength enough to make their eſcape.

The crews of the veſſels and tranſports that convoyed and carried the troops, ſuffered conſiderably by diſeaſes, which the ſeaſon produced, while lying on the coaſt: and about a thouſand ſeamen loſt their lives.

Of about 1800 people that were ſent to different poſts, at different embarkations, to connect and form the various dependencies

dencies of this expedition, not more than 380 ever returned. Of the officers who periſhed, the following is nearly an accurate account:

60th Regiment.

Lieutenants	3
Enſigns	3

79th Regiment.

Major	1
Captain	1
Lieutenants	5
Enſigns	3

Loyal Iriſh Corps.

Captains	2

Jamaica Volunteers.

Captains	4
Lieutenants	4
Enſign	1
Quarter Maſter	1

Legion Corps.

Captain	1
Lieutenants	5

Batteaux Corps.

Lieut. Colonel	1
Captains	3
Lieutenants	5
Enſign	1

Black Reg. Volunteers.

Captain	1
Lieutenants	3

Armed Veſſels.

Captains	2

Artillery.

Lieutenant	1
Commiſſary	1

Navy.

Captain	1
Lieutenant	1
Maſters	2

Marines.

Lieutenants	2
Surgeons	4
Surgeons Mates	7
Total	69

The

The ſurvivors of the party, after they left *San Juan* Caſtle, embarked for *Blue-Fields*, an Engliſh ſettlement about ſixty miles to the north of Saint John's river, where moſt of them died.

SECT.

SECT. II.

I HAVE related more of the *San Juan* expedition, and its consequences, than I ſhould have done, had it not formed part of the buſineſs of a campaign in which I was employed; beſides conſtituting the moſt ſtriking example to be found in hiſtory, of the ill effects of expoſing men to the rigour of the wet ſeaſons in hot climates. But I have ſuppreſſed much more of this expedition, as irrelative to medicinal hiſtory; not for want of authentic materials, nor for want of diſapprobation of many circumſtances with which it was connected; but as the failure of that undertaking has been buried, with many of its kindred, in the ſilent tomb of government, I hope I have not diſturbed its repoſe, but for the benefit of mankind, in which I have omitted all relations concerning individuals, and elucidations which might gratify that power,

at whose debasement the blow was wisely meditated, and ought to have been effectually applied.

If Spain could so easily reconcile to herself breaking the peace with England, without provocation, for the last war, and to assist in establishing an example, and power, for her own destruction, however defective she might have been in political sagacity, she has but done that moral justice to herself, that the world in general has long thought to be her due. For surely if the vengeance of offended morality, should ever be awakened to punish empires, Spain will be torn from her foundation, to expiate the horrid sacrilege she has committed, in dishonouring the name of God, and making religion wade through torrents of innocent blood, and sanctify the murder of twenty millions of Indians.

From the revolutions that have lately been occasioned in the Western hemisphere, it requires no great divination to foretel,

foretel, that this expedition will not be the laſt; and in that thought, I find myſelf inclined to a digreſſion, after having eſtabliſhed a beacon, to ſhew where the dangers lie, to which thoſe muſt expoſe themſelves, who undertake enterprizes againſt countries at ſeaſons of the year, when the elements fight for them, and render them impregnable.

Spain, in theſe American dominions, has long exulted in their ſecurity, which the diſtance from European powers has given them, and in the ſecrecy in which ſhe has kept the knowledge of thoſe dominions, by fallacious hiſtories, and ſuffering none to enter their ports, nor to have communication with her ſubjects. But inducement will ever remain to encourage an invaſion of many of the Northern parts of thoſe countries; for the ſame cauſe which makes an enterprize perilous to the aſſailants, will ever operate to expoſe thoſe places to inſults from their enemies.

The

The depopulation of many of the Northern and Eaftern frontier garrifons, from the deftructivenefs of the climate, frequently leaves them without a fufficient number of people in health to attend the fick, before they are relieved. The complement of troops allotted for the defence of each place, is generally cut off by death every three years: and the interior countries are conftantly drained to fupply this amazing wafte of human beings. The Governors accept their appointments with affurance, if they furvive, of promotion in healthful provinces.

When it will be the fate of thofe countries to raife up a friend, and experience a reverfe of fortune, by conqueft, or revolution, or how long they will remain objects of plunder to other nations, time muft difcover.

If the Englifh, from neglect, or from having relinquifhed their advantages*, fhould

* The Englifh territories, from their contiguity, and fupported by Jamaica, had every advantage that could be

ſhould turn from this vulnerable part of the Spaniſh monarchy, I think the Americans will not. That nation, ſpirited and enterprizing, without mines, without money, and without external commerce, will not long remain a nation of farmers, and be ſatisfied with virtuous poverty, when the means of enriching and elevating themſelves and their empire to grandeur are within their reach. It is not in nature to ſtifle thoſe ſtruggles of tempt-

be wiſhed for attacking the Spaniſh dominions. Theſe territories commenced at *Cape Catouche*, N. Lat. 21°, 30′, W. Long. 88, and ended at *San Juan* River, N. Lat. 12°, 0′, W. Long. 83°, 45′, including the two diſtricts of the Bay of Honduras, and the Muſquito ſhore. The *Bay of Honduras* commences at *Cape Catouche*, and ends at *Cape Honduras*. The *Muſquito Shore* commences at *Cape Honduras*, and ends at *San Juan* River. The internal boundary and extent of the Muſquito Shore it is difficult to aſcertain; as we derived our right from the ceſſions of the Indians, our limits were as indefinite as theirs. And if the diſtant mountains which bound the Spaniſh territories behind, be conſidered as the inland line, we poſſeſſed a country there, more than half as large as Portugal. The three principal ſettlements are at *Black River*, *Cape Gratias à Dios*, and *Blue-fields*.

ation,

ation, which give ſuch brilliant animation to our own and to our country's pride, and in which their common intereſts are ſo ſtrongly united.

In the ſettling down and arranging a permanent government, for the jarring intereſts of the North-Americans, difficulties, which every other people has experienced, may ariſe, and diſturb their happineſs.

Here is a new field to employ the turbulent ſpirits in, which that occaſion may give birth to. This is the road leading to fortune and glory, that will captivate the idle, the ambitious, and the vain, and draw them off, while the legiſlators have time to breathe.

This is the only drain for the firſt violent diſeaſe of ſtate, in which America muſt again unite, to acquire by popular means the neceſſary funds, and open the only ſource ſhe has for the influx of ſpecie into her country, to ſupport

an effective ſupreme legiſlature, or be ſplitten and broken up into little factions, and fall a prey to ſome tyranny, erected on her own animoſities.

Whenever America undertakes this buſineſs, the power of Spain cannot prevent the final diſſolution of her declining grandeur. The *Floridas*, which the Spaniards ſecured after the war, through jealouſy and fear, will be no barrier againſt the North-Americans. They will not make a circuitous attack through thoſe countries on *Mexico*; they will not march through deſerts and wilderneſſes, to lay down their arms to the firſt oppoſers.

Every man in North-America is by nature a General, for ſuch an enterpriſe as this; where rapidity and ſurpriſe inſure ſucceſs, and regular encampment, approach, and fight, defeat; and where *Homerian* wiles and ſtratagem are more requiſite, than the ceremonious courage, and profeſſional formalities, of an European ſoldier.—It was thus that Cor-

TEZ* and PIZARRO enſlaved thoſe countries: and it was thus that the renowned buccaneer, SIR HENRY MORGAN, performed his various exploits in thoſe countries againſt the Spaniards.

When one ſurveys the terraqueous globe, and reflects on its unjuſt participation; when one ſees what a ſmall number of inhabitants, with induſtry and good laws, makes of rocks, ſwamps, and deſerts, and that ſloth and tyranny turn to no account millions of human beings, and millions of acres, in the fineſt and moſt fertile regions of the earth;—when one reads the hiſtory of the Spaniards, there is an holy zeal, that inflames the heart with the ſpirit of retribution, for the immenſe depredations which they have committed on the works of nature, to

* CORTEZ left the *Havannah* for the conqueſt of *Mexico*, on the 10th of February, 1519; murdered all the Indians before him, except one tribe or two of parricides which aſſiſted him; entered *Mexico* on the 8th of November, and ſoon after had the Emperor in fetters in his own palace. This was indeed expedition.

obtain their Mexican and Peruvian dominions, and for the uſes they have ſince made of thoſe ill-gotten, but glorious poſſeſſions.

Wafer, an Engliſh ſurgeon, ſays, he and ſome others landed at *Vermejo*, in Peru, in 1687, and marched about four miles up a ſandy bay: " All which," he ſays, " we found covered with the bodies of " men, women, and children, which lay " ſo thick, that a man might, if he would, " have walked half a mile, and never " trod a ſtep off a dead human body. " Theſe bodies, to appearance, ſeemed as " if they had not been above a week " dead; but if you handled them, they " proved as dry and light as a ſponge, or " piece of cork. After we had been " ſome time aſhore, we eſpied a ſmoak, " and making up to it, found an old " man, a Spaniſh Indian, who was ranging along the ſea ſide, to find ſome " dried ſea weeds, to dreſs ſome fiſh " which his company had caught; for " he belonged to a fiſhing-boat hard by.

" We

"We aſked him many queſtions, in Spa-
"niſh, about the place, and how thoſe
"dead bodies came there? To which he
"returned for anſwer, that in his father's
"time the ſoil there, which now yielded
"nothing, was green, well cultivated,
"and fruitful. That the city of *Wormia*
"had been well inhabited by Indians;
"and that they were ſo numerous, that
"they could have handed a fiſh, from
"hand to hand, twenty leagues from the
"ſea, until it had come to the King's, or
"Inca's hands. That the river was very
"deep, and the current ſtrong; and
"that the reaſon of thoſe dead bodies
"was, that when the Spaniards came
"and blocked up, and laid ſiege to the
"city, the Indians, rather than lie at
"the Spaniards mercy, dug holes in the
"ſand, and buried themſelves alive.
"The men, as they now lie, have with
"them their broken bows, and the wo-
"men their ſpinning wheels and diſtaffs,
"with cotton yarn upon them."

FREZIER, a French voyager, who was alſo in Peru, in 1712, confirms the ſame account: he ſays, "The vale of *Hilo*, in "which there are not, at preſent, above "three or four farms, formerly main-"tained an Indian town, the remains of "which are ſtill to be ſeen, two leagues "from the ſea; a diſmal effect of the ra-"vages the Spaniards have made among "the Indians.

"There are ſtill more moving marks "of the misfortunes of that poor na-"tion, near *Arica*, above the church "of *Hilo*, and all along the ſhore as far "as the point of *Coles*, being an infinite "number of tombs, that when they "dig at this very time, they find bo-"dies almoſt intire, with their clothes, "and very often gold and ſilver veſ-"ſels. Thoſe I have ſeen are dug in "the ſand the depth of a man, and "incloſed with a wall of dry ſtone; they "are covered with wattles and canes, on "which there is a bed or layer of earth,

"and

" and ſand laid over, that the place " where they were, might not be ob- " ſerved. They were ſo terrified, that " they thought they muſt all die, when " they were informed, that the Spaniards " had not ſpared even their King ATA- " BALIPA, who among them was looked " upon as the offspring of the Sun, " which they worſhipped. Therefore, " to eſcape out of their hands, they fled " as far as they could Weſtward, to im- " plore the mercy of the Sun; but being " ſtopped by the ſea, they buried them- " ſelves alive on the edge of it."

But even Spaniſh inquiſitorial policy itſelf, which has ſo often found annihilation a ſhorter road than converſion, cannot extinguiſh the eternal flame of local patriotiſm.—This, the only guardian of the houſhold gods, in every country, is as dear to mankind as their ſacred altars, and is venerated in every clime.

The deſcendants of Europeans, natives of Spaniſh America, by whom revolutions

muſt be made, in ſeveral parts of that country, feel that attachment to their ſoil, which nature has planted in every being; and do not ſubmit to accumulated impoſts, and groan beneath the inſolence of office, and ſee the mortifying diſtinctions, that neither place of truſt, nor honour, is repoſed in any hands but European Spaniards, without the moſt pungent indignation, that ſhakes even the prejudices of religion.

As to the Indians, cultivation and induſtry is carried no further by them, than is neceſſary for their exiſtence. The Governors are not the only people that take upon them to pillage the Indians; the merchants, and other Spaniards who travel, take boldly from them whatever they want; and if the owners dare to ſpeak a word, they are paid with blows, ſo that in many places thoſe people, being worn out with ſuch vexations, keep nothing in their houſes, not even to eat. They ſow no more *Maiz*, or Indian corn, than is requiſite for the family,

mily, and hide in ſome caves the quantity they know, by experience, they ſhall have occaſion for through the year. They divide it into fifty-two parts, one for every week in the year; and the father and the mother, who alone know the ſecret, go every week to bring out a week's allowance.

Theſe people, being driven to deſpair, by the hardneſs of Spaniſh uſage, there is no doubt, as FREZIER ſays, but they only wiſh for an opportunity to ſhake it off. But even in this wretched condition the Spaniards have never been able to ſtifle their idolatry, for the memory of their beloved *Incas*.

All the circumſtances of the death of *Atabalipa*, the laſt of the *Incas*, whom *Francis Pizarro* cauſed to be murdered, are well known.

The love they bore their native Kings, makes them ſtill ſigh for thoſe times, of which traditions have been handed down

to

to them by their anceſtors. In moſt of the great towns of *Peru*, up the country, they revive the memory of the death of *Atabalipa*, by a ſort of tragedy they act in the ſtreets, on a certain day once a year. Endeavours are conſtantly uſed by the Spaniards to ſuppreſs this ceremony, and they have of late years debarred them the uſe of ſtages, on which they repreſented the death of that *Inca*.

In a country thus prepared, though plunder and rapine might meet with oppoſition, ſhould a tolerating and well-concerted plan, by any foreign power, ever be adopted to give it aſſiſtance, there will be no difficulty in liberating the inhabitants, and eſtabliſhing ſome equitable government, under which the natives, and the reſt of mankind, may live in happineſs, and have a free and commercial intercourſe with other parts of the world, and enjoy their religion, the fruits of their induſtry, and thoſe bleſſings, which nature has there abundantly diſtributed,

and

and which ought to be converted to the benefit of mankind.

The *Mexicans* will not be behind hand: their injuries are deeply engraved. The Indians there alſo have faithfully recorded a comprehenſive deſcription of the vaſt ſlaughter of their countrymen, in the ſubverſion of their empire; and of the impious murder of *Montezuma*, by the treacherous *Cortez*, in his own hoſpitable palace.

SECT.

SECT. III.

THE force that had been long expected, and that was to have given effect to the *San Juan* expedition, arrived in Jamaica on the 1ſt of Auguſt, 1780; and after having been embarked many months too late for the campaign for which it was deſtined, it was afterwards delayed by a ſix months paſſage from England, by contrary winds.

The 85th, 92d, 93d, and 94th regiments, under the command of GENERAL GARTH, an approved good officer, conſtituted this force. The 93d and 94th, on their arrival, were in a miſerable condition; the former having brought the gaol diſtemper, from England, and on the voyage moſt of thoſe who had not periſhed, were ſo reduced, as to be unable to ſtand the climate, or to bear the inconveniencies to which they were

were expoſed, and almoſt all of them died in Jamaica.

The firſt battalion of the 60th, and the 79th and 88th regiments, were already in the iſland.

The above force, with the Loyal Iriſh, and ſeveral irregular corps, with armed boats for the ſervice of the Lake *Nicaragua*, was thought fully adequate to the undertaking, had it been aſſembled in time to have embarked from Jamaica at a proper ſeaſon of the year, to have puſhed their conqueſt until they had ſecured a permanent lodgment in the heart of the Spaniſh dominions.

But if thoſe people who remained in poſſeſſion of *San Juan* Caſtle, had been able to keep it until the ſeaſon for ſending reinforcement arrived, the enterpriſe had now new difficulties to encounter; for the Spaniards had employed all their ſtrength to fortify the entrance of the Lake above the Caſtle, which at firſt was

was in a manner defencelefs. But after the account arrived of the fate of thofe who began the bufinefs, and that the Caftle was again in the hands of the Spaniards, all further idea of expedition was abandoned.

On the difembarkation of thefe troops in Jamaica, the flank companies of each regiment encamped at *Caftile Fort*, and afterwards at *Up Park*, where they were joined by the flank companies of the 60th, 79th, and 88th regiments.

The encampment continued during the months of Auguft, September, October and November; in which months it rained at different times, confiderably, on twenty-eight days. At this feafon of the year, in that ifland, the moft unhealthy, it is not to be fuppofed this was a matter of defign. There were no barracks to receive the troops, and it was a matter of neceffity. Two temporary barracks were caufed to be erected, through the good fenfe and vigilance of GENERAL GARTH, at

at *Up Park*, as ſoon as poſſible after their arrival, in which as many men as they could contain were placed. But more of the men might have been better accommodated, if ſome difficulties had been removed, that the judicious propoſal made by MAJOR RICHARD CREWE, of the 85th regiment, might have been adopted; which was, to occupy, as barracks, the empty houſes in the town of Kingſton. He wiſely conſidered, that health in hot climates was not eaſily to be recruited, and that keeping the men together, was of little utility, where rigid diſcipline was impracticable.

The care of the camp hoſpitals devolved on me. In an encampment, circumſtanced as this was, when the days were ſuffocatingly hot, from the irregularity and deficiency of the ſea breeze, at this ſeaſon of the year; when the nights were cold, on account of the land wind; expoſed to the autumnal rains; the men lying on the ground; their tents not ſufficient to defend them either from the intenſe heat of the ſun, or from the coldneſs

neſs of the night, or from the rain; health was not to be expected; it was impoſſible to be, there.

It may be eaſily imagined that our camp hoſpitals were ſoon crowded. Raw European troops expoſed in ſuch a climate, to all its inconveniencies, muſt ſuffer in the moſt ſevere manner; and of this ſmall body of men of the flank companies, by the 12th of September, we had in *Caſtile Hoſpital* 109, in *Rock Fort Hoſpital* 88, and in *Up Park Hoſpital* 70, in all 267, chiefly of Fluxes, Bilious, and Remittent Fevers.

Thoſe who returned to Jamaica from the *San Juan* expedition, were haraſſed with obſtinate Intermittents, or Diarrhœal, or Dyſenterical complaints; or with painful enlargements of the liver, or ſpleen. Their complexions were very yellow, and their bodies emaciated. Some whom I attended, after their return, that had been long ill on the Spaniſh Main, had their intellects impaired, and their ſenſes

at

at times diſordered, during their weak and convaleſcent ſtate.

The late DOCTOR CHARLES IRVING, who was on the Spaniſh Main, and was to have commanded a corps of Indians, which he was raiſing for that ſervice, was a ſkilful phyſician:—He informed me, that in the Intermittent Fevers, the *delirium*, which commonly came on in the paroxyſm of the fever, after a few returns of it, ſometimes remained during the intermiſſions, which ſoon became irregular, from reduplications of the acceſſions; and that ſeveral men wandered about in a phrenzy, and died raving mad.

Imbecility of mind as well as of body, is a common conſequence of long and obſtinate diſorders in hot climates; and I have frequently obſerved that the mind has been greatly impaired after irregular and haraſſing intermittents, and ſometimes a temporary inſanity has enſued. This muſt have been alſo obſerved by

others; but as far as I know, no perſon, except SYDENHAM, who was the firſt that noticed it, has mentioned it as occurring in practice. He ſays, he had often found, when the patients had been extremely debilitated by long continuance of the diſeaſe, the doubling of the fits, and repeated evacuations, that they have been ſeized with a madneſs, when they began to recover, which went off proportionably as they gathered ſtrength*: but that ſometimes from injudicious evacuations only, it has degenerated into a miſerable kind of folly for life†.

* Plus ſemel tamen adverti, ægros a morbi diuternitate, et paroxyſmorum ingeminatione, accedentibus ad malorum cumulum evacuationibus repetitis, ad ſummam debilitatem redactos, ubi primum cœperint convaleſcere, in *Maniam* incidiſſe, quæ pari cum illo paſſu receſſit, quo eorumdem vires de novo redintegrabantur.

P. 84.

† Poſt evacuationes fortiores adhibitas, in miſeram quandam *Stultitiam* degenerans, non niſi cum ipſa ægrorum vita terminatur.

P. 102.

But there is another caufe of thefe diforders of the brain in the Weft-Indies, which neither injudicious evacuations, nor climate, nor the nature of the difeafe, are in the leaft acceffary in producing, though generally attributed to them. This caufe is the *Peruvian Bark.*

In a letter I received from Doctor Irving, while he was at *Blue-fields*, he fays, " From neglect of your perfpiratory " practice, or from being deftitute of " proper neceffaries, I am convinced many " have been loft on this expedition. " Nature wanting vigour to difcharge " the incipient fevers by the pores, which " fhould have been fupported by warm " clothing and fudorific practice, &c. " But by trufting wholly to bark, an " early coma came on, and a paralyfis of " the limbs, and foon after death. I " have feen a multitude die at *St. John's* " without a point of variety from this " ftated."

He found that the ftomach required

the utmoſt attention; for the energy of that organ giving way, it was ſeldom reſtored. That nothing was ſo grateful as *London Bottled Porter:* wine was neither ſo much deſired, by the ſick, nor ſo ſerviceable in corroborating, and keeping up the powers of the ſtomach; which, like the reſt of the body, from the ſlighteſt indiſpoſition, was ſoon reduced to an uncommon ſtate of debility. With London bottled porter, and ſtrong infuſions of ſnake root, or cinnamon, and a diſcreet uſe of diaphoretics, and a cautious uſe of bark, he conquered many of thoſe Intermittents, which from incautious evacuations, and emetic tartar, would have degenerated into Fluxes, and Remittents, and from an exceſſive and untimely uſe of bark, into other diſeaſes, which art could not have remedied.

Bark, in unſkilful hands, is a precarious remedy even in Intermittents in the Weſt-Indies, and ſhould never be long perſiſted in, without evidently good ef-

fects,

fects, and then not without the frequent intervention of rhubarb and calomel.

If the Fever is a recent one, and has a tendency to a Remittent, the premature use of bark impedes the secretions, causes strictures in the capillary vessels, and fixes immovable obstructions in the brain; from whence follow the train of evils we have enumerated. This I have so often seen, that I can but wonder at writers not observing more caution, in advising bark early in the remission of fevers.

In Intermittents which succeed acute diseases, bark, without great care, does more harm than good. It increases those obstructions in the abdominal viscera, which almost always follow severe disorders in hot climates; and which bark often converts into incurable *Scirrhi*, or Dropsies.

In cases where the utility of bark was in the least degree equivocal, and where a reasonable quantity had been taken without

 success,

ſucceſs, I generally deſiſted from it, and had recourſe to other means.

The method I uſed in Intermittents, under theſe circumſtances, was, to order the patient to bed, and give him a vomit, at firſt, about two hours before the acceſſion; and after its operation, a warm opiate to promote perſpiration, with proper dilution. The next morning I gave a doſe of rhubarb and magneſia; and a few grains of calomel every night, for two or three ſucceſſive nights; and if the ſkin, or eyes, were tinged with bile, or the patient coſtive, a ſmall doſe of rhubarb and magneſia on the following mornings; otherwiſe not. This proceſs was intended to remove, or prevent, obſtructions in the abdominal viſcera, and glands, which always render Intermittents difficult to cure, and ſometimes make them fatal. But the cure turned on a regular courſe of warm diaphoretics, and the following draught, in conjunction with this proceſs, which always broke the force of the fever, ſhortened

ened its duration, and gave fair intermiſſions, without heat and quick pulſe, for taking bark with effect. Sometimes the diſeaſe was carried intirely off without bark.

℞ Aq. Menthæ Simpl. (vel Julep. e Camphor.) ℥iſs. Theriac. Androm. ʒj. vel ʒiſs. Spt. Mindereri ℥ſs. M.

This draught was given about an hour before the acceſſion, the patient being firſt put to bed, and perſpiration encouraged with wine whey, and herb teas. This was repeated until the intention was anſwered, in the ſame manner, before every return of fever: the patient remaining in bed until each paroxyſm had terminated in a complete ſolution by ſweat.

When this method without bark, when bark was inadmiſſible, did not ſtop the progreſs of the diſeaſe, and when united with bark, it was ſtill ineffectual (which was ſeldom the caſe, as bark is

moſt powerful in its effects, and leaſt injurious to the habit, if taken while the patient is in bed, or with a courſe of diaphoretics, or ſo guarded and managed that the pores of the ſkin may be kept freely open), I omitted the bark, and in its ſtead gave two ſcruples of *Calamus Aromaticus* Root, powdered; increaſing or diminiſhing the quantity as circumſtances required. This powder was given in a morning faſting, if poſſible, and repeated three, four, five, or ſix times a day, as the intermiſſion and ſtomach would permit, in a glaſs of wine, or a ſtrong infuſion of ſnake root.

Sometimes I purſued SYDENHAM's method *; particularly in Tertians, and in Quotidians, where the ſecretion of bile was enormous; which was, to order the patient to bed, and raiſe a ſweat by warm dilution, about two hours before the coming on of the fit; and as ſoon as a ſweat was raiſed, I gave a warm purgative,

* Pag. 92, *Sydenhami Oper. Omn.*

tive, combined with an opiate, and a diaphoretic. This caufed what SYDENHAM calls two contrary motions, fweating and purging, which not only fhortened the duration of the fit, but cleared the firft paffages thoroughly, and made way for giving bark, without injuring the liver or fpleen.

After the October rains Intermittents became the prevailing difeafes in the camps in Jamaica. Many Dyfenteries terminated in Intermittents; and among the convalefcents in both difeafes, many changed from one to the other.

The Dyfentery, as in all military operations, being our moft deftructive enemy, it is neceffary to give the hiftory of that important difeafe in a feparate treatife, and I fhall in this place only take notice of another difeafe that appeared, and difappeared very fuddenly in the camp, and proved fo often fatal, that it difheartened the men who were feized with it, took away all hopes of recovery, and difmayed their

their companions. I have the ſtrongeſt inducement for mentioning this malady, as I have the happineſs to be able to deſcribe its cure, which beſides being uſeful in practice, the ſubject may ſerve as a leſſon to ſhew that there are diſeaſes, which from experience only, and not from their ſymptoms, the curative indications can be aſcertained and anſwered.

This diſeaſe was a Putrid Bilious Fever, that invaded the men at *Up-Park* Camp. The inhabitants of Kingſton, and the neighbourhood, were greatly alarmed by it; and from the ſuddenneſs with which ſeveral men died, who were ſcarcely thought to be ill, and from the extraordinary yellowneſs of their bodies after death, it was imagined that ſome peſtilence had been brought to the iſland.

This fever came on with ſudden loſs of ſtrength, nauſea, clammineſs in the mouth, the eyes were dull, and tinged with bile; they were alſo ſunk in the head; there were beſides, in thoſe who died,

died, even from the firſt attack of the diſeaſe, ſeveral other marks of Hippocratical face, particularly the ſinking in of the temples. The pulſe was low and quick, the ſkin was moiſt, with heavineſs in the head, tenſion and uneaſineſs in the abdomen, and great anxiety; the ſkin ſoon became of a deep yellow colour, accompanied with coma, cold thin ſweats, and deep laborious hiccuping. It ended on the ſecond, third, or fourth day in death.

The EARL OF HARRINGTON, who commanded, reſided near the hoſpital, while this diſeaſe ſpread ſuch a terror, that almoſt every perſon who could, avoided the camp. His exertions and ſolicitude for the health of the men, merited the greateſt praiſe. His Lordſhip did all that could be done, circumſtanced as we were. He deſired I would inform him whether the diſeaſe was infectious, as was generally believed, or not; in order, if it was, that ſuch prudential meaſures might be taken, as would prevent its ſpreading,

and becoming univerſal. I informed him it was not contagious.

The coming on of this diſeaſe, indicating no conſiderable degree of fever, neither from the pulſe nor the ſkin; without vomiting or purging; and from the extreme weakneſs into which every perſon ſunk who was attacked, led to a mode of treatment at firſt, which did not prove ſucceſsful.

Thoſe who had taken their curative indications, from the treacherous appearance of the diſeaſe, began with ſupporting the powers of life, and preſſing for an opportunity of giving bark.

This is an error in all bilious diſeaſes, and is often committed in others, merely becauſe they are called putrid. It could not be productive of good effects, when nature was endeavouring to relieve herſelf, by the means of the liver, and unloading the habit into the inteſtinal canal.

It

It was indeed a very uncommon ſpecies, or rather degree, of bilious fever, and more rapid in its fatal effects, than any fever I had ever ſeen. But this does not warrant the giving it a new appellation, for it was truly the *Putrid Bilious Fever* of thoſe countries, in its utmoſt degree, without hæmorrhage, or any diagnoſtics of irritation; and in ſuch a ſtate as no perſon has before deſcribed, nor had I ſeen any thing nearly like to it for many years, though an inferior degree of it, the *Bilious Remittent Fever*, is a common diſeaſe, and with which the *Endemial Inflammatory Fever* (called the *Yellow Fever)* has been much confounded by writers.

Though I admit, in compliance with cuſtom, that to be a bilious diſeaſe, which is accompanied with ſuch an evidently preternatural ſecretion of bile, as diſcolours the eyes, or ſkin, and appears in all the excretions, whether there be fever or not, yet I conſider bile here as an effect, and an index of the ſtate of the liver, and not as the cauſe of the diſeaſe; and that the preſence, or abſence,

ſence, of irritability in the body, and acrid ſecretions in the ſtomach and bowels, perform all thoſe operations which are commonly attributed to bile.

Why does ſudden grief, or anger, in ſome habits, in an inſtant bring on vomiting, or purging of bile?

Can it be ſuppoſed that the cauſe of theſe operations is bile, and that thought in a moment ſhould acrimonize it? Or are not the actions of the viſcera brought on by nervous communication, as thoſe of the ſtomach are in the *Calculus Cyſticus*, and *Nephritis?*

But bile is always to be carried off by artificial means, when any preternatural quantity is excreted into the bowels. Not that it has any ſeptical properties, tending to diſſolve the blood in a living ſubject, as has been ſuggeſted from fallacious experiments, unconnected with life, but becauſe the liver is in a plethorical ſtate, and undergoing too much action, and acquiring a turgeſcence and plenitude in the

the *Pori Bilarii*, and *Ductus Hepaticus*, that muſt ſtifle its functions, unleſs this ſurcharge is removed ſpeedily through the *Ductus Communis* into the *Duodenum*, and obſtruction prevented, by ſtimulating the inteſtines, and increaſing their periſtaltic motion.

An omiſſion of this is another error often committed in Weſt-Indian practice.

It happened to me at the camp, as it does to others who have the ſuperintending any medical department, not always to have ſeen the patients on their being firſt attacked: putrefaction had far advanced, and the patients were under the uſual courſe of antiſeptics and cordials, frequently before I ſaw them.

As theſe medicines did not produce their natural and proper effects, and as at firſt every man that was ſeized, died—ſometimes two, three, four in a day—I began to conſider where the error of treatment lay (for all diſeaſes that ſooneſt deſtroy the frame, are ſooneſt cured, when

when we have found out the right method of treating them), and whether it might not originate from the dread of evacuations, on account of ſo much debility in the beginning of the diſeaſe, previous to giving bark.

On ſurveying the practice with all the reflection I was capable of, I was convinced this was the caſe; and immediately adviſed purging at the firſt onſet of the diſeaſe, and directed it to be continued, until contraindicated by weakneſs. But ſo far was the reſult of that apprehenſion from being confirmed by the event, that it was found that the men acquired ſtrength, in proportion as they diluted and were purged.

The ſtools were charged with a deep ſaffron-coloured offenſive bile, and the urine was of a deep yellow; theſe continued often unchanged after repeated cathartics. It ſeemed as if the very blood was nothing but bile, and that the body had the power of converting the fluids

which

which the men drank, inſtantly into bile: for many patients had twenty ſtools a day, for three days ſucceſſively, without intirely changing the appearance of them. When the ſtools altered, the ſkin altered, and then, and not till then, after this practice was followed, did I give any bark.

The purge we uſed was *Manna* and *Cream of Tartar*. We made a ſolution of thoſe ingredients in barley water, in a large tin kettle in the hoſpital, with which the men were ſupplied, to keep them conſtantly purging, as long as was neceſſary; diluting plentifully with water-gruel, or barley-water. We did not loſe one man after this mode of treatment was adopted.

During the encampment of the flank companies, the 85th regiment was alſo encamped at *Caſtile Fort*, and commanded by the honourable MAJOR HENRY PHIPPS.

This officer, notwithſtanding the evils and

and inconveniencies that furrounded us, making the beft of his fituation, fhewed that there are none fo bad, in which fome refource may not be found, by minds poffeffing aptitude and energy. From the judicious method in which he arranged the tents, and fhaded them with the boughs of trees; from a conftant attention not to expofe the men to the fun unneceffarily; from felecting proper times of the day for exercife, and other duties; from not only dividing the men in meffes, with a non-commiffioned officer to each mefs, but taking care that *their money was laid out properly*, by which means they always fat down to a good and wholefome dinner; and above all, from obliging them to take off their wet linen after rain, and to put on flannel, and never fuffering them to remain wet in body or feet; he gave a ftriking inftance, by the health and appearance of that regiment, that many difficulties may be furmounted, when profeffional talents are united with active zeal, and directed by judgment and humanity.

The

The clothing that our troops were furniſhed with in the laſt war, in the Weſt-Indies, was too heavy for the climate. The French clothing for their troops was more judiciouſly adapted. But great advantage would accrue to either, if every ſoldier was ſupplied with a thin flannel ſhirt or two; not made ſo ridiculouſly ſhort as their linen ſhirts always are, but long and full, otherwiſe it will be uſeleſs after waſhing. This ſhould be put on after they have been in the rain, or when any particular night duty, in bad weather, expoſes them on ſervice. This is among the beſt preſervatives of health, when men are obliged to lie in the field, or on the ground in hot climates, where a poſt is to be maintained, or where a defence, or an attack is to be made, attended with delay. But delay never ſhould be made in an *attack*, for the reaſon that makes the great *Fabian* maxim, "cunctando," a certain *defence* in hot climates, when the defenders are under cover, and their enemy expoſed to the weather, which they muſt be to guard againſt

alarms and ſurpriſes; and if they can be kept from poſſeſſing any town, or extenſive buildings, they may be left to climate and the "tented field."

It is hardly to be credited what men can go through wrapped up, as it were, in flannel. The coldneſs of the night air then has a medium to paſs to their bodies, which breaks the force of its impreſſion, and prevents the ſuppreſſion of perſpiration. Beſides, flannel acts as a friction to the ſkin, and keeps the pores open: it alſo creates an uniform atmoſphere round the body. DOCTOR IRVING, with a ſmall party of men, lay in the woods on the Muſquito Shore for fourteen days and nights, during the rainy ſeaſon of 1780, without taking off his clothes, while he was exploring a paſſage to the Spaniſh ſettlements up Bluefields River. He eſcaped without the leaſt injury to his health, having blankets with him, and being clothed in a ſhirt, ſhort jacket, breeches and ſtockings, all made of flannel. The others not uſing the

the ſame clothing ſuffered ſeverely, without expoſing themſelves to the ſame fatigue or danger.

Attention to the health of the ſoldiers, and *quid valeant humeri*, are the firſt objects for an officer's conſideration, particularly in countries and climates where men are not to be recruited; nor ſickneſs ſoon removed, nor health ſoon regained. A thouſand things may be laid down in European theories, that would be deſtructive in the woods of America, and under the burning ſun between the tropics.

Diſcipline here ſhould never be of that kind, nor degree, to exceed the proportion of exerciſe which is conducive to health. A ſoldier ſhould be nurſed. All drudgery ſhould be performed by negroes, and others, inured to the climate; and a ſoldier ſhould be admitted to no exertion, until ſome important point of the enterpriſe is to be carried into execution.

 That

That the greater part of the men in regiments periſh abroad, before the remainder learn to take care of themſelves, is an old complaint: but if the evils ariſe from cauſes that the ſervice can, it ought to remedy them.

The condition of a ſoldier ſhould place him in the eyes of his officer, as a child; and, like a child, he is ſometimes troubleſome and refractory, and muſt be ſerved againſt his will. But let it be conſidered, that prudence and good-ſenſe contribute very ſparingly to that part of an eſtabliſhment, where there is ſo much diſproportion, between rewards and puniſhments. Yet there is a gallantry in a ſoldier, that is always contented; nay more, it is always enthuſiaſtic, when he ſees his officer intereſted in his welfare, and will not ſuffer him to be wronged.

It is with pleaſure I acknowledge that I owe theſe reflections to the good effects of MAJOR PHIPPS's management in the

85th

85th regiment, and therefore recommend the method he followed for the adoption of others, who may hereafter be on ſervice in that part of the world. There, it is probable, they will learn from the moſt painful experience, that unleſs ſickneſs be prevented, no regiment can make any figure that will gratify an officer who is fond of his profeſſion; and that it is this alone which can inſure ſucceſs to any military operation; for the ſoldiers who have been once ill, from the tedioufneſs of recovery, and from frequent relapſes, are not only rendered totally incapable of ſervice for that campaign, but become an additional incumbrance to the movements of the army, and by the neceſſary increaſe of attendance and orderly-men in the hoſpitals to take care of them, a further diminution is made of the forces, that might be employed on active ſervice in the field.

ON THE

DYSENTERY.

PART THE FIRST.

THE Dysentery, or Bloody Flux, being a diſeaſe ſo deſtructive to ſoldiers in camps and garriſons, and a conſtant attendant on all military operations, particularly in hot climates, it is a medical inquiry of the utmoſt importance to inveſtigate the diſeaſe, on every occaſion, with the greateſt attention, in hopes of finding ſome method to put a ſtop to its devaſtation. It is a ſubject in which the

the welfare of mankind is deeply interested, and often the glory and honour of a nation. If the caufe of humanity was not alone a fufficient motive to induce to this refearch, we need but turn our eyes on the political field; there we may behold the beft concerted meafures defeated by its influence. The page of military hiftory weeps lefs for the flain in battle, than for thofe who have fallen victims to this calamity.

We have greatly to lament that the labours of medical writers hitherto, have met with fo little fuccefs, and that their beft endeavours have only fhewn, how little we know, and how much we have to learn, in treating this difeafe.

Happy fhall I be, if the following obfervations may contribute to remove fome of the many difficulties which prefent themfelves, and induce a further profecution of the fubject, until the difeafe is brought under the command of the moft improved and certain practice.

The

The word Dyſentery, in Latin *Dyſenteria*, and in Greek Δυσεντερία, is derived from δὺς, with difficulty, and ἔντερα, the inteſtines; importing a difficulty, or a diſturbance of the functions of the inteſtines.

The Dyſentery is termed by the Latin writers *Difficultas Inteſtinorum*; CELSUS calls it *Tormina*; GALEN, ἕλκωσις ἐντέρων: CÆLIUS AURELIANUS, *Rheumatiſmus cum Ulcere*; and it is thus deſcribed by HIPPOCRATES in the third book, *de Victus Ratione:*

Οκόταν δέ θερμαινομένου τȣ̃ σώματος κάθαρσίς δρίμέα γένηταί, τὸ, τε ἔντερον ξύεταί καὶ ἑλκουται, καἰ διαχωρέεται αίματώδεα, τȣ̃το δέ δυςεντερίη καλέεταί, νȣ̃σος χαλεπή τε καὶ ἐπικίνδυνος. "When the body is heated, and there is an acrimonious purging, with corroſion and ulceration of the inteſtine, and bloody ſtools, the diſeaſe is called a Dyſentery, and is a ſevere and dangerous diſorder."

GALEN, *de Locis Affectis*, Lib. VI.

Cap. 2. ſays, Χρὴ δ᾽ ὑμᾶς ἐν τῷ παρόντι λόγῳ, τὰς κυρίως ὀνομαζομένας δυσεντερίας ἀκέειν, ὡς σημαινούσης τῆς προσηγορίας ἐντέρων Ἕλκωσιν. "It is neceſſary to underſtand properly the meaning of the word Dyſentery, as the appellation itſelf ſignifies an ulcer of the inteſtines."

He ſays at firſt a ſharp bile is diſcharged, which is followed by abraſions of the inteſtines, and ſoon after blood, and this conſtitutes a true Dyſentery.

"When the abraſions of the bowels are diſcharged, it is to be obſerved, whether any fat ſubſtance is voided with them, for then the ulcer is in the large inteſtines. When blood is voided, it is neceſſary to obſerve whether it is mixed univerſally with the excrements, or whether it is only ſuperficially upon ſome part of them. If it be mixed with them, it ſhews that the ulcer is in the ſuperior inteſtines; if it appears on the ſurface of them, the ulcer is in the inferior inteſtines. The ſame obſervation applies

applies in regard to the abrafions, in fome degree, and likewife the fhreds that are voided, which will fhew alfo by their proper fubftance, which inteftine is affected. In this manner, Dyfenteries that arife from the liver, are to be difcovered: in the beginning, a thin, bloody fanies is difcharged; then, by the difeafe increafing, a thick humour, not unlike the fæces of red wine. Befides, in Hepatic excretions, no abrafions are voided: and fometimes, during an interval of two or three days, the evacuation is fuppreffed; then returns again, with difcharges, much worfe than the former, which is not the cafe when there is an ulcer in the inteftines, in which the patient has neither large ftools, nor long intervals between them. When the ulcer is in the rectum, the difeafe is called a *Tenefmus*; it is attended with vehement ftraining, and a conftant defire of going to ftool, voiding at the fame time but little, which in the beginning is pituitous and pinguious, but in length of time, a fpecies of abrafions is alfo voided; but through

through the whole of the diſeaſe, the fæces from the ſuperior inteſtines, have nothing of this ſort mixed with them."

"Some writers mention, that after a great ſtraining to ſtool, preceded by a vehement pain, a ſort of callous ſtones have been voided, not unlike thoſe which are generated in the bladder; but I have never ſeen them, nor have I ever heard of any perſon who has."

He ſays, in his Comment on the Epidemics, *Lib. III. Comm.* 3, *Sect.* 70, "that there are two ſorts of Dyſenteries; one from an ulceration of the corroded inteſtines, and the other, when a copious diſcharge of blood from the veins of the inteſtines is evacuated." And in *Lib. III. Cap.* 2, *de Symptomatum Cauſis*, he ſays, "there are four different ſpecies of bloody excretions, from four different cauſes: one of pure blood, from the loſs of a limb, or from foregoing any accuſtomed exerciſe. Another, when from an imbecility of the liver, a watery blood is diſcharged,

discharged, like the washings of raw flesh. The third, when a black and shining blood is discharged. In these three species of excretions, the discharges are large; but in the fourth, the stools are smaller and more frequent: sometimes pure blood is voided, and sometimes in a concreted state; sometimes a small quantity of matter; also sloughs of ulcers, which the Greek writers call Εφελκίδες; besides membranous substances, which are parts of the intestines themselves: with these excrements are often voided, having drops of blood in them. This last, he says, is an exulceration of the intestines, and which only, some writers will allow to be properly called a Dysentery."

In *Lib. II. Cap.* 5, *de Locis Affectis*, he says, "the pains are caused by a corroding humour, which with an ulceration of the intestines, the modern physicians, and many of the ancients, call a Dysentery. Some of the latter not only term this, but also any bloody excretion, a Dysentery."

Some

Some of our modern writers have disputed with the ancients, respecting the propriety of describing the Dysentery, with an ulceration of the bowels, because an ulceration is not a primary symptom, nor necessary to constitute a Dysentery; being, as Alexander of *Tralles* observes, rather the effect than the cause of the disease.

But these discriminations are as useless as the various divisions into which these moderns have marshalled different sorts of Dysenteries, as the Acute, Chronic, Bilious, Malignant, Putrid, Benign; Red, White, Brown, Grey, &c. which distinctions, in fact, are only applicable to the various appearances of the same disease, as influenced by climate, season, constitution; to different stages and degrees of it; and to such cases where some other disorder, or epidemic, is united with it.

Hippocrates himself, it is certain, makes use of the epithet ἐρυθρὰ, red, *in*

Morb.

Morb. Vulg. Lib. II. and in other places; but he uſes the word δυσεντερία every where, in a general ſenſe, as well as GALEN, diſtinguiſhing this diſeaſe from the Διάῤῥοια, *Alvi Profluvium*, or Diarrhœa; and from the Λειεντερία, *Levitas Inteſtinorum*, or Lientery.

The *Diarrhœa* is deſcribed by ARETÆUS to be a flux of liquid and unconcocted aliment *; and by GALEN to be a plentiful flux of the belly, without any inflammation or exulceration of the inteſtines †. The *Lientery* is a diſeaſe, according to GALEN, wherein the food paſſes quickly through the body, very little changed, or thrown out liquid but not corrupted, without pain, and the body is waſted. *Aphor.* HIPP. *Comment. VI. Sect.* 1.

SYDENHAM, in treating of the Epidemical Dyſentery in London, of 1669, 1670, 1671 and 1672, uſes the word in

* Cap. 7. de Sig. et Cauſ. Diut. Morb. Lib. II.

† Definition. Medic.

ſo general a ſenſe, that he has been attacked by ſome obſervers of trifles, for ſaying, at the ſetting in of the Dyſentery in the firſt Autumn, ſeveral had no ſtools at all, "*quamplurimi nullis omnino dejecti-*" *onibus moleſtabantur*." Page 182.

HIPPOCRATES ſpeaks of the diſeaſe where the patients were not much afflicted with pain; *Lib. III. de Morb. Vulg.* δυσεντερικοί οὐδὲ τοί λίην επιπόνως: and SYDENHAM ſays, that the epidemical conſtitution declining, the gripes were ſcarcely felt; "*Tormina vix perciperentur.*" Page 182.

Having premiſed thus much concerning the definition of the diſeaſe of which I am treating, of which further and ample deſcriptions may be found, by referring to ARETÆUS, AETIUS, CÆLIUS AURELIANUS, and ALEXANDER *of* TRALLES, I ſhall proceed to the firſt article for Therapeutical conſideration.

The immediate cauſes of all diſeaſes, well underſtood and properly conſidered, point to their cure. It is an obſervation of the illuſtrious SYDENHAM, that poſſeſſing this knowledge, and a correct hiſtory of a diſeaſe, he never was at a loſs to preſcribe a ſuitable remedy for it; and that he always proceeded with caution, until thoſe circumſtances were aſcertained.

The diſorder in queſtion has been, I believe, more conſidered from its effects, remote, and concurring cauſes, than from its *immediate* cauſe: hence we may account for the inefficacy of the various attempts to cure it.

The pen of writers has done little more in the Dyſentery, than record the times and places when and where it proved moſt fatal; the appearance it put on; its ſymptoms; its devaſtation; variety of modes of treatment, that had no certain ſucceſs; now and then a re-

markable cafe; and the phænomena difcovered on diffecting the dead *.

The great author above-mentioned, following nature as an unerring guide, never ftopped at effects, neither did he bewilder himfelf in the fearch of thofe caufes of difeafes, that are not cognizable by our fenfes, but proceeded on to fuch as are immediate, or conjunct, and obferved and affifted the means employed by nature to relieve herfelf ftruggling under the oppreffion of difeafe, or fubftituted a fafer and better method, when hers was dangerous or ineffectual. To

* The various appearances of the inteftines after death, from this difeafe, have been defcribed by a multitude of writers; and many of their defcriptions collected together by BONETUS, and may be feen in his admirable work, the *Sepulchretum*, *Lib. III. Sect.* 11. But as diffections of this fort lead to nothing towards the cure of the Dyfentery, and as the appearance of the inteftines varies according to the habit of the patient, and the duration of the difeafe, I have fuppreffed an account of many diffections I have made, as demonftrative only of its effects, which are fufficiently known to all practitioners.

which

which principle the world is indebted for that ineſtimable work, that can only periſh with it: a work founded on a baſis applicable to all climes; that ſtands as the PALLADIUM of phyſic againſt the ſuperſtitious errors of the middle ages, and the ingenious chimeras of later times.

He diſcovered the Dyſentery to be a Fever of the Seaſon, *or of its own kind, turned inwards upon the inteſtines.* "*Febrem eum* "*eſſe ſui ſcilicet generis, in inteſtina introver-* "*ſam.*" Page 170 and 182. And yet his ſucceſſors have made but little farther uſe of this excellent aphoriſm than quoting it, as their rules laid down for treating the diſeaſe ſufficiently prove.

In the courſe of my experience in the Weſt-Indies, and from every account I have been able to procure in that part of the world, I have invariably found the truth of SYDENHAM's opinion, and have remarked, that as the flux conforms by the number of ſtools, and by its rapidity,

 to

to the violence, ſo it does the ſtate of the fever, of the ſeaſon, when it prevails; and the ſtools are more frequent, and all ſymptoms more aggravated, at thoſe hours when the current fevers are in their exacerbation, and the reverſe when thoſe fevers are in their remiſſion; beſides, the alternate ſucceſſion of one diſeaſe to another, I have frequently obſerved. Nor can it be doubted that this *Fever of the Inteſtines*, like moſt others, is cauſed by *obſtructed perſpiration*; not confined to cold, hot, wet, or dry ſeaſons; particular food, water, liquors, or fruit; but chiefly depending on ſome ſecret influence in the atmoſphere, or on ſudden tranſitions of the air, and ſuch other cauſes as expoſe people to have this diſcharge haſtily ſtopped.

I know that writers have written very learnedly on remote, pre-diſpoſing, and proximate cauſes; and lay great ſtreſs on heat and moiſture, putrid ferments, infection, &c. &c. But upon a ſtrict examination, we ſhall find that there has

been too much attention employed on theſe vague, uncertain, and never to be defined circumſtances, while the *immediate cauſe*, or *primum mobile*, has eſcaped unnoticed.

Epidemical diſeaſes can have but one general and immediate cauſe; for what pre-diſpoſing cauſe can exiſt, where every diverſity of habit of body, and age, is ſubject to the ſame ſymptoms, and cured by the ſame remedies? It is not to be doubted that a conjunct cauſe is neceſſary, by which one part becomes affected and not another, otherwiſe obſtructed perſpiration, the parent of ſo many, would always produce the ſame diſeaſe.

Though I believe that Epidemical Dyſenteries have but one univerſal and common cauſe, and may be removed by one univerſal and common remedy, yet I do not contend that a particular diſeaſe may not be created by a particular cauſe, and be cured by a particular medicine. Accidental *ſtimuli* in the bowels have often

 cauſed

caused this disease, and a little rhubarb and laudanum have often cured it.

It is said by *Cuspinianus*, that the Emperor *Theophilus* died of a Dysentery, which was caused by drinking a large draught of very cold water. *Fabricius Hildanus* mentions a Princess to whom the eating of mushrooms had almost proved fatal by the same disease *. *Ælian* says, that *Tachos*, an Egyptian, a remarkably healthy man in his own country, lost his life by a Dysentery in Persia, which he brought on by changing from his accustomed diet, to that of the luxurious Persians †. *Amatus Lusitanus* says, the people in India and Egypt have Dysenteries, from eating the flesh of animals that feed on *Cassia Fistula* ‡. I have frequently known Dysenteries caused by eating immoderately of such fruit as pine apples and oranges, when people

* De Dysenter. Cap. 10.

† Lib. V. Cap. 1. Var. Histor.

‡ Cent. II. Curat. 45. in Scholia.

have

have newly arrived in the *West-Indies*; and in *Paris* from drinking the water of the *Seine*; and from a change of water in many countries. But the cause of epidemical diseases is no more to be considered from particular cases, than the natural life of man is to be estimated, by the age of those that fall by casualty, or perish by untimely death.

The consequence of obstructed perspiration, from whatever cause, is either great inflammation, or great debility; and a plethora in the body, of much greater extent than what can be caused by the loss of a limb, or the suppression of the menses, or a bleeding at the nose; and yet HIPPOCRATES and GALEN assign these, which many other writers and frequent observations confirm, to be sufficient causes to produce a rupture of vessels, in other parts of the body.

By what conjunct cause this plethora, from obstructed perspiration, should be directed to the intestines, and not

not to the lungs, I do not know. If this conjunct cauſe is only ſome latent matter in the bowels, how comes it, that in camps, where the officers and men often uſe a totally different diet, and are in many reſpects under different circumſtances, and in cities, where infants, adults, old people, and thoſe of every deſcription, and mode of life, fall indiſcriminately in an epidemical ſeaſon?

The great outlet for perſpiration being the ſkin, it muſt ever be ſubject to variation in quantity from the viciſſitudes of the air. In the temperate clime of Italy, it appears by SANCTORIUS* that perſpiration amounts to five-eighths of what is taken into the body; we cannot, therefore, be ſurpriſed at the violent efforts nature immediately makes, on the ſudden ſuppreſſion of an habit of ſuch extent: and if we attend to the ſtools of ſome patients, after the common contents of the bowels are diſ-

* *Sanctorius* ſays, fifty ounces of perſpiration is diſcharged from a man in a day in Italy. *Kiel* computes that thirty-three ounces is the mean quantity in England.

charged,

charged, before the blood-veſſels are broken, and at intervals when there is no mixture of blood, or mucus, we ſhall find they are nothing but a ſerous, acrid fluid, ſecerned from the blood.

As I have conſtantly practiſed in the opinion that an Epidemical Dyſentery is a *Fever of the Inteſtines*, and that this fever is univerſally cauſed by the *Obſtructed Perſpiration* being determined there: ſo I have univerſally found it relieved by turning back that diſcharge to its natural channel; nor have I often found difficulty in removing it ſpeedily, when taken in the beginning of the diſeaſe.

The common and fatal practice of attacking the diſorder in the bowels, with opiates and aſtringents, is but aggravating the effect, which at firſt is irritation, and diſtention of the meſaraic veſſels, while the cauſe is intirely neglected.

Among the multitude of *Formulæ* propoſed, we find *Snake Root*, *Dover's Powder*, and

and other diaphoretic medicines; but exhibited in ſuch a manner that they muſt often have produced more harm than good: however, it plainly demonſtrates that the ſkin has not been really looked to for relief, much leſs has the proceſs of SWEATING been conſidered as the only one to be relied on.

Some phyſicians recommend *Ipeçacuanha* in ſmall doſes, united with *Philonium*, or *Opium*: others a courſe of *Ipecacuanha* in ſtages of the diſeaſe, when the inflammatory ſymptoms are over. The good effects are attributed, ſometimes to its anti-ſpaſmodic power; ſometimes to its purging, and ſometimes to its aſtringent quality. But with the greateſt deference poſſible to theſe opinions, which have been numerous, I believe with FRIEND, that *Ipecacuanha* increaſes the tendency of the humours to the ſkin; and therein conſiſts its uſe in fluxes *.

I ap-

* Radix Ipecacuanha præter vim vomitariam, quam obtinet, uberrimum ſudorem excitare ſolet. Atque in

I apprehend that no aſtringent medicines, ſimply as ſuch, will often be found proper in fluxes: this is daily evinced by gangrenes, obſtinate obſtructions, abſceſſes, dropſies, or ſwellings, which ariſe when a flux has been injudiciouſly ſtopped by them †: a Dyſentery being, in its firſt ſtages, "*a Fever of the Inteſtines,*" and in every ſtage, as far as relates to the excretions, an increaſe of one diſcharge from the diminution of another: which cannot be effectually remedied, but by reſtoring the functions of the body to their natural order and equilibrium.

MONSIEUR DE SENAC gave *Emetic*

in hoc, quantum ego conjectura aſſequi poſſum præcipue conſiſtit egregie, illa in Dyſentericis effectibus virtus, quam ſibi præ aliis vomendi inſtrumentis vindicat.

FRIEND. *Comment. de Febr.* p. 40.

† HIPPOCRAT. Prœnot. Sect. 2. "Intempeſtivè ſuppreſſa Inteſtinorum Difficultas, abſceſſum in Coſtis, aut in Viſceribus, aut Articulis inducit." And GALEN de Ven. Sect. adverſus ERASISTRAT. Cap. 6, ſays, "Melancholia, Inſania, Pleuritis, Dolor Renum, Sanguinis Vomitus, Epilepſia, Hydrops, oriri poſſunt."

Tartar

Tartar in ſmall doſes; but he expreſsly ſays, he gave it as a *laxative* to keep up a free paſſage from the ſtomach to the rectum. It is a common practice to give the *Glaſs*, and other preparations of *Antimony*, in caſual doſes, and uncertain periods, but the operation is always intended for the firſt paſſages: in this practice though the *primæ viæ* are ſo neceſſary to be cleanſed, I attribute the principal ſucceſs to the effects antimonials produce, in opening the obſtructed capillaries, and preventing a reflux of humours to the bowels; for often in fluxes, when from careleſſneſs and cold, antimonials have had their whole force and action turned upon the bowels, they have increaſed the determination of the fluids there, and brought on ſudden death.

The activity of emetic tartar makes the direction of it difficult; it is in many reſpects a dangerous medicine, in hot climates, the nervous ſyſtem there, being ſo irritable,—except merely as an emetic. It has done much miſchief when employed

ployed as a diaphoretic in fevers and fluxes, the reguline virulence of the antimony being combined with acid, makes its operation, as a ſudorific, very precarious; and it often proves fatal to the ſtomach.

Such preparations of antimony, as from the effects I ſhould ſuppoſe *James's Powder* to be, that have, what has been termed the phlogiſton of the mineral, mitigated, and the reguline part capable of action, from acidity, are beſt in theſe diſeaſes, being more certainly ſudorific; their operation on the ſtomach and bowels conſiderably depends on the ſtate of the humours contained there; and they principally become active when nature requires it.

It has been ſuppoſed that the doſes of theſe preparations of antimony cannot be ſo well aſcertained as its ſolution by the vegetable acid; for which reaſon emetic tartar has been preferred for uſe. It muſt be admitted that emetic tartar is

is a certain vomit, and when given for that purpoſe the doſe is eaſily aſcertained: but as it acts immediately on the ſtomach, it is frequently impoſſible to produce any other effects by it, doſe it how you will. A very reſpectable phyſician, at the head of a medical ſeminary, has greatly contributed to the general uſe of emetic tartar, and much abuſe of it has ariſen in hot climates, from reſpect to his authority and character.

It has been ſuppoſed alſo that the application of cold air, as a ſedative, by abating the reaction of the vaſcular ſyſtem, may be uſeful in ſome circumſtances of a fever but the propoſer himſelf does not venture to pronounce in what: this dangerous conjecture too we have ſeen followed, by the extravagant cuſtom of expoſing patients indiſcriminately in fevers and fluxes, almoſt *ſub dio*, and the miſchief produced diſregarded.

A moderately cool, temperate air, is proper and neceſſary in every ſpecies of fever;

fever; but if any thing beyond that degree is meant, it cannot be ſupported by any reaſoning that applies to the ſmall-pox; though this gave riſe to the ſpeculation, and many experiments on it, in the Southern parts of Europe.

The ſmall-pox fever is *ſui generis*, and terminates in phlegmons; it requires a treatment of its own; for example, cooler air than is required in a ſtate of health is neceſſary; raiſing a ſweat is prejudicial, and often changes the diſtinct into the confluent ſort. On the contrary, in fevers their ſolution is commonly by ſweat: cold air applied, as in the ſmall-pox, impedes that ſolution, and changes an Intermittent into a Remittent, or both into a continued fever.

The preceding paragraph will not be deemed digreſſive, as it is neceſſary to elucidate my ſubject.

It is not my intention to diſpute the auxiliary aid, that may occaſionally be

drawn from various purgatives, and even from various aſtringents, in certain conditions of a Dyſentery, Diarrhœa, or Teneſmus; or from Rhubarb, Abſorbents, and Correctors, in unimportant complaints of the bowels, originating there from acrimony and crudities; but to recommend a practice for removing Epidemical Dyſenteries, by means adequate to, and that correſpond with, their general cauſe.

It will occur to every practitioner (as my intention here is the uſe of SUDORIFICS) that I mean *a careful, continued courſe of them, to keep up a* SWEAT *in extent proportioned to the violence of the diſeaſe*; and not the trifling way of giving them in ſmall doſes, whilſt the patient is expoſed, and their operation neglected. It will occur alſo, that *the Sudorific employed muſt be ſuitable to the nature of the flux*; *the ſtage of it*; *the conſtitution of the ſeaſon*; *and the habit of the patient.*

When I propoſe a method for the cure of this diſeaſe by a courſe of Sudorifics, I

am

am aware of no objection that can possibly attend the novelty of the doctrine; except that it wants the sanction of the Fathers of Physic, to oppose the errors and prejudices of custom; but that must yield to facts, where this disease is most formidable, from the important consideration that success in war, the safety of possessions, and the protection of commerce, depend on the preservation of soldiers and sailors; among whom the flux has ever been found to make the most dreadful havock in the East and West-Indies, and on all service in hot climates.

As much depends on a convenient and proper HOSPITAL, wherever a great number of sick are collected together, the situation and construction of it require consideration. An Hospital should be not only situated on an healthful spot, but in the vicinity of a market, where good water, wood, and every necessary can be supplied without fatigue, delay, or trouble. The evils arising from the

reverſe of this, require no animadverſion. Let us conſider the evils attending its improper conſtruction *. Inſtead of its being lofty and ſpacious, we find the contrary mode is adopted in all the military hoſpitals in the Weſt-Indies; and it is generally thought ſufficient to have a multitude of doors and windows, in all places appropriated for the ſick: theſe doors and windows are kept conſtantly open, to make the Hoſpital what is called *airy*.

Hoſpitals and ſick rooms ought to be well ventilated, no doubt; but as the ſick ſhould not be ſtifled with heat, ſo they ſhould not have currents of wind directed on their bodies: in this caſe, no diſeaſe can poſſibly be thrown off, or complete a criſis by the emunctories of the ſkin. How then can men recover from fevers, chiefly from obſtructed perſpiration, expoſed to a ſtill increaſing cauſe? To this ſource we may principally attribute the

* Vide page 30.

multitude

multitude of what are generally called convaleſcents; which, in truth, for the moſt part, are people labouring under chronical complaints, from the imperfect ſolution of acute diſeaſes.

It cannot have eſcaped the notice of any perſon that has reſided in the Weſt-Indies; that ſitting long in the confined direction of a breeze, brings on a feveriſh, diſagreeable ſenſation; and ſometimes pains in the face, neck, joints, and a great degree of fever:—How then muſt it be with a patient, who, in a little hut of an hoſpital, is placed at a door-way, or raiſed on a platform to the level of an open window, to prevent ſuffocation from heat, if a critical ſweat ſhould break out? The ſweat is ſuddenly ſtopped; and if death does not enſue, the diſeaſe (which under the kind operation of nature would end in a day or two) is lengthened out into months.

The coſt of a good hoſpital is nothing

in the ſcale of expence; it is a ſoleciſm in œconomy to have a bad one. A bad Hoſpital may deprive the ſtate in a few months of as many men, whoſe value would amount, in political calculation, to a ſum ſufficient to build a good one.

Though I have had a ſucceſſion of opportunities in my private practice, to prove the extent of the doctrine I advance; I have alſo had many opportunities to prove its efficacy, in that degree of Dyſentery, which is no where to be ſeen but in military camps and garriſons: for which reaſon I ſhall illuſtrate the ſubject with a ſhort account of the Bloody-Flux, as it raged among his Majeſty's troops in Jamaica, in April, 1780, and particularly in the camp at *Caſtile Fort*, with the method that I followed in the treatment of thoſe committed to my care.

The camp was on a riſing-ground near the ſea, about five miles to the Eaſtward of

of Kingſton: the ſituation is airy, free from ſtagnant water and unwholeſome exhalations, but expoſed to the force of all the elementary tranſitions.

This flux will appear to want almoſt all the uſually-conceived remote cauſes of a Dyſentery; but it will be found, with the immediate one, common to all.

The ſtate of the human frame for ſome time prior to the above period, underwent a multitude of diurnal tranſitions, from the abſence, or preſence of a violent ſea breeze: the weather was now remarkably dry, hot for the ſeaſon of the year, and at times ſultry. It was impoſſible to uſe the leaſt exerciſe without being heated; and it was almoſt impoſſible to get heated, without being immediately chilled by the breeze*.

* When the breeze is violent, and what is called *fiery*, it checks perſpiration, when people are expoſed to it, in an inactive ſituation, making the ſkin dry and parched, and cauſing a feveriſh tendency.

It is the ſoldier's life to be much expoſed, and it is his cuſtom to be careleſs of himſelf: when he is fatigued, or heated, he haſtens to cool himſelf in the breeze, or night air, and perhaps throws off his clothes, and often lies down and ſleeps in that condition. If he is wet, he dries his clothes, linen, and ſkin together. By theſe means, perſpiration, the great fountain of health in hot climates, is ſuddenly ſtopped, and febrile ſtrictures occupy the whole ſurface of the body.

A *Flux* following theſe *data*, muſt diſtinguiſh itſelf by an inflammatory diatheſis; and its progreſs will conſequently be rapid.

The general ſymptoms were a chillneſs in the beginning, ſucceeded by feveriſh heats; gripings, and frequent ſmall motions; ſickneſs of the ſtomach, and ſometimes retchings; copious purging ſoon followed, with green, brown, or yellow watery ſtools: theſe were now mixed with,

with, or ſucceeded by great diſcharges of blood: ſeveral ounces of pure arterial blood were voided in a ſtream, every half hour, or hour; and ſome patients bled to death in this manner. The ſtools varied in fætor, and appearance, according to the periods of the diſeaſe, and as they were more or leſs retained: a conſiderable degree of fever brought on the diſeaſe, and accompanied it with ſome; with others, but little; ſmall bloody, ſlimy ſtools, continually haraſſed the patient in the laſt ſtages, particularly at nights: the tongue was greatly furred, and ſometimes of a brown, or black colour. Apthæ appeared but ſeldom. This is the general account of thoſe who experienced the violence of the diſeaſe, and ſurvived the firſt week; but many who were ſeized at the ſetting in of the flux that Spring, periſhed in three or four days.

The curative indications are to cleanſe the inteſtines, and to cauſe a revulſion to the ſurface of the body. When the diſ-

eaſe

eaſe is rapid, the cure depends on performing theſe things as ſpeedily as poſſible.

Experience having ſhewn that the common methods and medicines, hitherto uſed, fall far ſhort, in violent Dyſenteries, of obtaining the important point of revulſion, in proper time, and ſupporting it; the practice will ſtill be deficient, if we cannot find means adequate to theſe purpoſes.

The inductive conſiderations are, to bleed whenever it can be done with ſafety; to cleanſe the *primæ viæ*; to check the impetus with which the circulation is determined on the inteſtines, diſtending and burſting the coats of the diſtributing branches of the Meſenteric Arteries; to remove the ſpaſm from the veſſels of the ſurface of the body, and to cauſe a diverſion there;—all theſe muſt be done immediately, that the revulſion may be effectual.

Bleeding

Bleeding being an operation of great confequence in the flux, the cure is generally begun with it, repeating it as the fymptoms authorife. There are but few inftances where it may not fafely be done in the beginning of the difeafe; obferving only, "*non quæ ætas fit, fed quæ vires fint* *." The neceffity is obvious, where the patient is plethoric, with much fever, full pulfe, and fevere pains.

After bleeding, a vomit of *Ipecacuanha* is to be given, which commonly relieves the ftomach from a load of acid, poraceous, bilious impurities. But our great expectation from vomiting is, that its action on the mufcular fibres of the ftomach, forces open the extreme arterial capillaries, forwards the circulation to the furface of the body, and induces to fweat. An opiate after its operation is neceffary.

After the vomit and opiate, it is proper to empty the bowels, but with cau-

* CELS. Lib. II. Cap. 10.

tion,

tion, in caſe the patient is weak; and in ſuch a manner, as not to increaſe the determination of the blood there, and divert it from the ſurface; for then we ſhould loſe the ground gained by the vomit, and counteract our principal deſign. An antimonial that acts much upon the ſkin, and purges at the ſame time, is what I always uſe.

The *primæ viæ* being cleanſed, and the revulſion begun, it muſt be ſupported by ſudorifics, that the diſeaſe may be thrown off by ſweat: this will be effected by uniting an opiate with a diaphoretic, and adminiſtering it as occaſion requires. Laudanum and antimonial wine combined, is a medicine that cauſes little or no irritation, and is a pleaſant and certain diaphoretic. It is always neceſſary in the flux, when a ſweat is intended by antimonial, or other emetic medicines, in ſmall doſes, to add laudanum, to take off their irritation, by which means their doſes and effects may be greatly extended.

James's

James's Powder is admirably calculated to anſwer the firſt intentions in this diſeaſe: it poſſeſſes this great advantage, that though it ſhall effectually cleanſe the *primæ viæ*, properly given, it never fails to excite a plentiful ſweat, and its effects terminate on the ſkin. This double operation, if I may ſo call it, perhaps has made it ſo deciſive in obſtinate fevers.

When the diaphoreſis is begun, I cover my patient, if he is a ſoldier, with his blanket, (which no ſoldier ſhould be without), and take care that the wind is not admitted directly upon him. I do not ſuffer him to uncover himſelf, but order whatever he wants to be brought to him, and ſupply him copiouſly with warm mint, ſage, balm, or oatmeal tea; and now and then give him a baſin of gruel, or thin flour pap, with a ſpoonful or two of good, ſound white wine in it, as free as poſſible from acidity.

When the ſudorific proceſs has been

ſucceſsfully

ſucceſsfully continued, all the ſymptoms grow milder; and if the patient breaks out in a raſh, or efflореſcent eruptions, or boils, the diſeaſe will ſoon be removed.

Should it be objected, that uncovering and expoſing the patient while ſweating, when he riſes to go to ſtool, is an inconveniency which militates againſt my doctrine; I anſwer, that where there are proper attendants and utenſils, the patient need not be expoſed, nor move from his bed: and that when once a complete and univerſal ſweat is raiſed, the neceſſity for expoſing the patient at all, will ſoon be at an end, as the diſeaſe ſometimes ſuddenly diſappears.

In London, laſt Winter, a gentleman had taken a doſe of Glauber's ſalt, and the ſame evening went into a warm bath, after which he returned to his own houſe. In the night he was ſeized with pains in the bowels, and a conſtant irritation to go to ſtool. The next day he voided

voided blood, and bloody mucus, and had a complete Dyſentery. He took chalk julep, and laudanum for two days; but the ſymptoms increaſing, he had bloody excretions almoſt every quarter of an hour, with great ſtraining, anxiety, laſſitude and fever. Being conſulted, I adviſed him to go to bed, and to take *ten grains* of *James's Powder*; to cover himſelf well; and to dilute and promote a ſweat; and to continue the ſweating, by repeated doſes of *James's Powder*, every four hours, drinking plentifully of warm balm, or mint tea. The *James's Powder* made him retch a little at firſt, and he continued to have ſeveral griping ſtools, until the powder produced a plentiful ſweat; after which, the pains abated; he had no ſtool for twenty-four hours, he took three doſes of the powder, and was cured.

In the Weſt-Indies, in the preſence of ſeveral of the officers of different regiments, who were deſirous to be ſpectators of a fact ſo intereſting to the army, a ſoldier has been taken in the worſt condition of the diſeaſe, with blood running

from him, as in a hæmorrhage from a wound, and in the utmoſt agony; I have given him three grains of the common *Glaſs of Antimony*, finely prepared, and made into a ſmall pill: this perhaps has operated upwards and downwards; but in promoting its operation to the ſkin, thoſe other operations ceaſed, and a violent ſweat has enſued; which was kept up by warm herb teas, and now and then ſmall doſes of laudanum, which may always be given with ſafety, and without any of its uſual inconveniencies, while the patient is ſweating, which is a fact worthy the attention of practitioners:—even the firſt ſtool, after the ſweating has been raiſed, has been leſs bloody, and the third, or fourth, frequently ſcarcely tinged.—Such is the power of REVULSION.

If the flux continues obſtinate, and the ſweats do not go on kindly, it will not only be requiſite to carry off the morbific humours by a doſe of the antimonial purgative, but repeated vomits of *Ipecacuanha* are to be given. In this caſe the

the circulation has not been enough diverted from the inteſtines, to produce a full and ſufficient diaphoreſis: it is therefore neceſſary to give a freſh impulſe to the fibres, by the action of vomiting: for in vomiting, the action of the ſtomach, and the contraction of the abdominal viſcera, force the blood to the ſurface and upper parts of the body.

Another cauſe of obſtinacy in the flux, is indurated fæces, lodged in the inteſtines; and though the patient ſhall have been repeatedly purged, and taken nothing but fluids during his illneſs, it is amazing what *ſcybala*, or lumps of excrement, will ſometimes be brought away, by a repetition of the antimonial purgative, after an interval of ſeveral days: for which reaſon, when the ſweats have been plentiful, the pulſe moderate, and the flux ſtill continues, we may ſuſpect this to be the caſe.—The extraordinary appearance theſe balls of excrement, ſometimes acquire from a long retention

among the diſeaſed ſecretions, have induced ſome writers to whimſical ſuppoſitions concerning their cauſe, and component principles.

Pringle ſays, he does not know whether thoſe lumps, which have the appearance of *ſuet*, are the ſame which Hippocrates calls σάρκες, *carunculæ*.

Certainly they are not: for the σάρκες of Hippocrates (Σάρξ, *Caro*), are thoſe excretions that *Celſus* calls "*Carnoſa.*" Galen ſays, they are the muſcular ſubſtance of the inteſtines. Cardanus ſays, that they are "*a meſenterio et vicinis partibus eroſis inteſtinis.*" And commentators in general ſay, that they are "*ſecunda inteſtinorum tunica.*" Beſides, Hippocrates ſays, that the σάρκες are a fatal ſymptom: ὁκοῖαι ἂν σάρκες ἀποχωρήσωσι, θανάσιμον*. However, Brassavola, in his comment on this paſſage, ſays he has cured patients who have voided them.

* Aphor. 26, Sect. IV.

The *Corpora Pinguia* are concretions by no means fatal, nor uncommon in the Dyſentery, though the *Carunculæ* certainly are, notwithſtanding what BRASSAVOLA aſſerts; for as FORESTUS ſays, "— ita ut quædam *Corpora Pinguia* duntaxat excernantur, facile curari poterit,—ita ut veluti *Carunculæ*, hoc eſt, magnæ inteſtinorum partes excernantur, lethalis eſt talis Dyſenteria." Lib. XXII. Obſ. 33. Scholia.

The *Corpora Pinguia*, have been always properly diſtinguiſhed by every writer of experience and correctneſs, from the *Carunculæ*, *Strigmenta*, and *Ramenta*.

PRINGLE has fallen into the ſame error reſpecting the *Caſeous*, or cheeſy ſubſtances, frequently found in the ſtools of dyſenteric people; ſuppoſing it actually cheeſe eaten by the patient. PLATERUS makes the ſame miſtake reſpecting the pinguious ſubſtances.

I purſue the method I have related, regu-

regulating it as occaſion may require, or particular occurrences ſuggeſt, until the patient is in a condition for bark, and other tonics and corroborants.

The flux will continue troubleſome in ſome ſubjects from mere weakneſs, and relaxation of the veſſels, without any material gripings, or feveriſh ſymptoms: here I never heſitate to give bark, with ſnake root and wine.

In all complaints of the bowels, particularly in the Dyſentery, bark ſhould never be given in ſubſtance; it cauſes irritations and gripings; and either brings back the diſeaſe, or fills the patient with obſtructions: a ſtrong decoction, therefore, is ever to be preferred.

As the flux is always increaſed at the approach of night, ſo for ſome time after it has abated, the pulſe quickens, and the patient grows feveriſh in the evening: this is an admonition that we ſhould

deſiſt

desist from bark, and give a gentle diaphoretic at nights.

The remaining acrimony which sometimes keeps up a small irritation, after every other symptom is removed, may be corrected with absorbents, and carried off before the use of the bark, or at any subsequent period if it should recur, with rhubarb and magnesia, or any mild cathartic.

During the convalescent state of those who have been much reduced, and to prevent a relapse, a flannel shirt, or jacket, worn next the skin, is very beneficial. When the bowels have suffered considerably by the flux, and cannot recover their tone, but from weakness are subject to returns of the disease, or to diarrhœa or tenesmus, on the least exposure to cold, a flannel jacket next the skin, will be found almost a certain remedy and preventative. Such occasional clothing is very useful to officers and soldiers, on service in hot climates, exposed

to rains, dews, or night air; or to put on after having been wet, fatigued, or heated, that perſpiration may not be ſuddenly checked, and that the body may cool gradually *.

It is to be obſerved, when the attack is ſudden and violent, it is often neceſſary to overtake the diſeaſe with opiates, and cordials, before any recourſe to pathological reaſoning is to be adopted; otherwiſe the patient may be exhauſted and ſunk, beyond the recovery of medicine.

Here I cannot help expreſſing my concern, that the aggravated ſymptoms which return in the morning, have not put an end to the cuſtom in the army and navy practice, of giving large doſes of *Opium* at night. When opium is given alone, and continued for any time, after its cordial effects are over, it weakens the veſſels, injures the nerves, cauſes either a ſtrangury, or a paralyſis of the bladder,

* Vide p. 132.

and lowers the powers of life: the humours, inſtead of being diſſipated, accumulate in the diſeaſed parts, that when the conſtipation it has created is off, the blood ruſhes forth with increaſed violence, and accelerates the patient's end.

DEGNER ſays, with many of his patients there was an intire ſuppreſſion of urine, for ſix, eight, ten, or fourteen days *. Several writers mention ſuppreſſion of urine among the ſymptoms of this diſeaſe; but as I have never ſeen any thing like it occur, where opiates, or aſtringents, had not been improperly uſed, I conſider it rather as a ſymptom of miſmanagement, than of the diſeaſe. From opium I have often obſerved this effect; and have ſpeedily removed it by giving a cup of ſtrong, clear, good COFFEE, every few hours.

In the beginning of the diſeaſe, the inteſtines are in a ſtate of inflammation:

* In his Hiſtory of the Dyſentery, at *Nimeguen*, in 1736, page 17.

and in the farther advanced ſtate of it, we find the meſenteric veſſels and glands enlarged and obſtructed; the inteſtines thickened, their coats tumified, relaxed, abraded, and haſtening into a ſtate of ulceration, or ſphacelation: *Opium*, in theſe ſituations (where only the diſeaſe is curable), muſt increaſe and multiply every evil.

The real uſe of opium is to arreſt the hurry of the diſeaſe; to procure time to put ſome rational method of cure into execution; to take off the irritating property of other medicines, and to give them their intended effect, and to eaſe thoſe *tormina* which are ſometimes intolerable. Here the matchleſs power of opium raiſes our admiration.

In the preceding hiſtory it will appear, that the Flux is not confined to particular ſeaſons and ſituations: that what have been commonly conſidered as remote cauſes, only give the type to the diſeaſe; and that its general cauſe, producible

ducible various ways, is obſtructed perſpiration.

The Flux that prevailed in Jamaica, in the Autumn of the year 1779, was attended with many of thoſe cauſes, that are called remote; Auguſt, September, October, and the beginning of November, were unuſually cloſe and ſultry, with frequent rains: the great diſcharge of perſpiration from the rarefaction of the blood, in ſuch a ſeaſon, relaxes the extremities of the perſpiratory veſſels, and ſubjects them to ſudden ſpaſm and collapſion.

The Camp Dyſentery, in low, damp, marſhy countries in Europe, in the Autumnal ſeaſon, has all the concomitants, and type of a Flux in hot climates, after heavy rains.

There will be leſs diſpoſition to inflammation, and the fluids will tend more to a ſtate of diſſolution;—yet it is *a Fever turned upon the Inteſtines,* for want

of

of a free and regular perſpiration, from the thickneſs and moiſture of the atmoſphere.

The irritation thus produced on the bowels, ſoon cauſes a violent determination of the blood there, and as the circulation is diminiſhed in the veſſels of the ſurface of the body, it is increaſed in thoſe of the inteſtines.

By this increaſed action of the arteries, the progreſs of the blood is impeded in the minute ramifications of the veſſels; hence extravaſation and hæmorrhage: an immediate revulſion is therefore neceſſary; it muſt be extenſive, but ſuitable, that there may be no miſchief done, by increaſing the debility incident to the diſeaſe.

Bleeding cannot be performed on every ſubject, nor in every ſtage, nor condition of a Flux; cathartics only cleanſe the affected parts; emetics are limited to anſwer particular purpoſes; diaphoretics have never

never been uſed in a manner, nor extent ſufficient to produce an effect; and the cuſtom of expoſing patients to partial currents of cold air, in the Weſt-Indies, prevents nature from doing any thing towards the cure.

The type of the diſeaſe being duly attended to, will indicate the quantity and nature of the evacuations neceſſary to facilitate revulſion; and it is ſafely and effectually completed, by a careful, continued courſe of SUDORIFICS, and dilution, carried on in extent proportioned to the diſeaſe.

Thus have I communicated what I conceive to be the general cauſe of the DYSENTERY, and explained the method I have followed in its cure. I have avoided the detail of minute deſcriptions, circumſtances, particular caſes, and diſſections, as not coming within my deſign; which is to explain my method of cure, applicable to the cauſe I have aſſigned of this diſeaſe, and compriſed in

in the following confiderations:—That the Dyfentery is a *Fever of the Inteftines*; that the caufe is *Obftructed Perfpiration*; and that the cure confifts in calling back the circulation to the furface of the body, and increafing the fenfible perfpiration by the moft active SUDORIFICS.

Induced by motives not to be refifted, I have ventured on the public, without the advantages of leifure and retirement; and as I have nothing to expect from the ornaments of diction, and compofition, I have placed my *fpes et folatia* in the rectitude of my intentions. The judicious and candid will judge of them, and determine how far an attempt to make fome return for the benefits which we receive from fociety, is laudable, when it contributes to mitigate one of the great calamities of mankind.

*** Moft of the preceding part of this Treatife, has been feveral times publifhed, under the title of OBSERVATIONS *on the* DYSENTERY *of the* WEST-INDIES, *with a new and fuccefsful Method of Treating it.*

ON

ON THE

DYSENTERY.

PART II.

THE Dysentery that raged with so much violence in the Spring of the year 1780, in Jamaica, was the principal epidemic which the season produced, among adults; but there was a malignant ulcerated sore throat, that seized children and very young people, and proved fatal to almost every infant that was attacked with it. This disease, which was the occasion of mourning to almost every family in the town of Kingston, was attended with very little fever, fætor, or pain; for

it

it ſometimes was not diſcovered by the parents, nor nurſes of children, until a few hours before their death. It was frequently unobſerved until the whole throat, fauces, and pallate, were intirely rotten. Some who recovered loſt their uvula, and part of their palate. Some had their ſpeech and articulation afterwards conſiderably affected by it. The diſorder made its firſt appearance in April, and continued through the remainder of the year, but gradually abated. In Auguſt, ſome children who had eſcaped the ſore throat, broke out with very large boils. In September the ſore throat attacked adults, but in them it yielded to purging medicines, gargles, and bark.

I uſed gargles made of Decoction of Bark and Mel Egyptiacum, in general practice, and from their efficacy, I lamented that the Mel Egyptiacum could not be uſed with ſafety for children. However, I found a ſolution of White Vitriol and Roch Alum, a very good detergent, and almoſt never-failing remedy to cleanſe their

their fauces with; and if a little of it was ſwallowed, it had always a good effect, by cauſing a ſmall degree of retching, by which the ſtomach and throat were cleanſed of mucous and ſloughs, and great relief was obtained.

As diſeaſes in hot climates in general are ſuppoſed to owe their origin to accidental, or incidental moiſture, added to heat; and that thoſe ſeaſons which are moſt diſtinguiſhed for the quantity of rain, are moſt diſtinguiſhed for the quantity of diſeaſes; it may be proper to remark, that epidemics frequently appear there, without the co-operation of any known cauſe whatever; and that neither the Sore Throat, nor the Spring Dyſentery, were produced by wet weather, as will appear from what follows; which will alſo ſerve to give a general idea of the climate at and near Kingſton, where *Fahrenheit*'s thermometer is on an average at nearly 83, and *Reaumer*'s, 22 $\frac{1}{2}$ degrees, through the year.

1780, *January*. Two days rain in this month. Cold North winds four days in the beginning of the month. Land winds at nights. Very little ſea breeze in the middle of the days, and ſometimes hot; but in general cool, and very healthy.

February. Five days rain. A ſtrong ſea breeze day and night, in the middle of the month, and ſultry weather. Very cold day and night during the rains on the 22d and 23d. Land wind at nights.

March. No rain this month. Mornings and evenings cool. Middle of the days hot. A ſtrong ſea breeze in the days, and land wind at nights.

April. One day rain. Violent ſea breeze, guſty and turbulent.

May. Four days rain. Sea breeze violent.

June. Twelve days rain. Strong ſea breeze.

July.

July. Four days rain. Sea breeze moderate. Sultry nights.

August. Five days rain. Sea breeze in the middle of the day only. Intenſely hot in the mornings before the ſetting in of the breeze. Light land wind at nights.

September. Nine days rain. Sultry in the abſence of the breeze, which was ſtrong about noon. Land wind at nights.

October. Eleven days violent rain. Cold during the rain. Hot at other times. Land wind ſtrong at nights, and cold. Little ſea breeze, and very cloſe days in general.

November. Three days rain. Cloſe, hot days. No ſea breeze, except now and then for a few hours, in the middle of the day. Land wind at nights, and colder than uſual at this ſeaſon of the year.

December. Three days rain. Nights and mornings very cold. North winds ſome days. The weather cool and agreeable.

This ſtatement of the ſenſible alterations of the atmoſphere, in which the expreſſions of *cold* and *hot* are to be conſidered comparatively, and thoſe days numbered as rainy, not as intire days of rain, but only when it rained for a few hours, or part of a day, is ſufficiently minute to ſhew how far its influence might have prevailed, in the production of thoſe diſeaſes which marked the year.

As I have already ſaid, the 85th, 92d, 93d, and 94th regiments, arrived in Jamaica on the firſt of Auguſt this year, for the *San Juan* expedition*:—that the firſt battalion of the 60th, and the 79th, and 88th regiments, were already in the iſland; that the flank companies of each regiment were en-

* Page 108.

camped

camped at *Caſtile Fort*, and afterwards at *Up-Park*; that the encampment continued from the beginning of Auguſt to the end of November; that I undertook the care of the camp hoſpitals, and that there were, by my return on the 12th of September, 267 men ill, chiefly of the Dyſentery, and of Bilious and Remittent Fevers, in the different hoſpitals of *Caſtile Fort* and *Up-Park*, and in the barracks of *Rock Fort*, which was then uſed as an hoſpital.

Our hoſpitals at *Caſtile Fort* and *Up-Park* were very ſmall, and extremely hot; and conſequently crowded and unclean. But of the vaſt number who had the Dyſentery, we did not loſe one man in the acute ſtate of the diſeaſe.

Rock Fort barracks were chiefly uſed as a convaleſcent hoſpital; which, notwithſtanding its unhealthful ſituation, we were obliged to occupy for want of a more proper place. Here the men, inſtead of recovering, ſuffered relapſes, and

were haraſſed with Intermittent Fevers, and Chronical Diarrhœas, after the removal of their primary diſeaſes, in the other hoſpitals.

In the treatment of the Dyſentery, whether attended with fever or not, I proceeded with the Sudorific proceſs, as I had done in the Spring. This Autumnal Flux, like all Fluxes that I have ſeen, exerted its influence moſt on thoſe who were moſt expoſed to the weather.

Dyſenteries, as well as other diſorders, in hot climates, in Autumn, have more of the putrid than of the inflammatory diatheſis; and perſpiration is raiſed with leſs difficulty, and with gentler medicines, than it is at other times when the fibres are more rigid, and the air more dry and elaſtic; for which reaſon, mild Diaphoretics, ſuch as Antimonial, or Ipecacuanha Wine and Laudanum, were uſed in the camp this Autumn; and evacuations, particularly bleeding, were ſparingly made. Sometimes the ſweat raiſed by the

firſt

first vomit of *Ipecacuanha*, assisted by diluting with barley-water, mint, balm, or sage tea, put a stop to the disease.

I never gave *Ipecacuanha* as a vomit, nor *Glass of Antimony* as a purge, in the Dysentery, latterly, but previously to their operation, I ordered the patient to his bed, and disposed him for sweating: this I found by experience always insured that operation, on which the cure depends; and sometimes carried the whole effect of the medicine off that way, without either vomiting or purging.

When the Glass of Antimony is used, great care should be taken that it is finely levigated, and in the dose, that the strength of the patient is considered. Another advantage attends giving it when the patient is in bed, which is, that its action on the bowels being abated by perspiration, a much larger dose may be given that way: and let me repeat, that an active dose of any antimonial should never be given while the patient is up, and walking

about. Ten grains of Glafs of Antimony will act lefs on the bowels, while the patient is in bed, than three grains will while he is up, and the whole effect turned upon the bowels, by being expofed to the air. Befides, fudden death has been frequently brought on by fpafm, from Antimonials carelefsly adminiftered *. If the Glafs of Antimony inclines the patient to vomit, I advife the diluting but fparingly, unlefs what is brought up indicates foulnefs of the ftomach; but copioufly otherwife.

From the effects of the *Vitrum Antimonii Ceratum*, I have never been able to difcover that the Antimony derives any benefit whatever from its mixture with the *Wax*. For an active dofe of either muft be given, or it anfwers no end; and if melting the Antimony with the Wax weakens its force, a greater quantity muft be given to produce a proper effect.— Therefore, I always ufe the common Glafs of Antimony, preferring a fimple medi-

* For fpafms in the ftomach or bowels, caufed by Antimonial Medicines, Laudanum is the only remedy, and immediately removes them.

cine that I can depend upon, to a compound medicine that muſt be liable to uncertainty in its operations, according to the attention or careleſſneſs employed in its preparation.

The operation of the Glaſs of Antimony, in common with all the preparations of Antimony, in proportion to their activity, is exerciſed on the firſt paſſages. But every preparation of Antimony is more or leſs diaphoretic, whether it creates a nauſea or not, while any part of the mineral remains undeſtroyed in it. We perceive it in thoſe which are called the *Calces*; and however violent the operation of the ſtronger preparations are, their laſt effort in the body is always at the cutaneous pores.

It is remarked, by LIND, "that "Antimony appears to poſſeſs a virtue "eminently febrifuge, which it frequently exerts independent of *any evacuation* *." It would, if it was ſo, be

* Eſſay on Diſeaſes, &c. page 260.

very remarkable; but the truth is, that Antimonials are not febrifuge, where no evacuation is produced, and the ſtomach remains unnauſeated.

After the *Cerated Glaſs of Antimony* had been introduced into public practice, in the Dyſentery, its reputation ſoon ſpread over all Europe, for its efficacy in that diſorder; but from the unguarded manner of giving it, while the patient was up, and walking about, without more reſtriction than was uſed in a common vomit, or purge, it was always dangerous, and it ſoon ſunk into diſcredit. The timid might well refrain from uſing it, for it ſometimes ſurpriſed them with the moſt violent and unlooked for effects. The doſe of it was from two grains, to ten, or twelve, ſometimes to twenty, according to the age and ſtrength of the patient; and the doſe was repeated every twenty-four, or forty-eight hours, as occaſion required. It was given faſting, and the patient was "*forbid drinking* "*any thing after it for three hours, unleſs very* "*ſick, or diſpoſed to vomit; in which caſe*

"*warm*

"*warm water, as in other vomits.*"—"*In*
"*its operation, it ſometimes makes the patient*
"*ſick, and vomits. It purges almoſt every*
"*perſon, but I have known it cure without*
"*any ſenſible evacuation or ſickneſs* *."

It is this unperceived, and inſenſible evacuation, to the preceding writer, for which I contend, and by which all violent degrees of Dyſentery, let the ſpecies or deſcription be what it may, if the *primæ viæ* are cleanſed properly, may be cured, if they are curable at all.

This axiom I know is repugnant to the opinion of the learned BOERHAAVE, who inſiſts on the neceſſity of a variety of methods, and a variety of medicines; and ſtrongly condemns the recommending of any one univerſal way of cure in a diſeaſe †. But I muſt diſſent from that great man,

* YOUNGE's account of it, in the Edin. Medical Eſſays, Vol. V. Pages 164, 165.

† Quam vanum, fallax, et damnoſum ſit ad has commendare unum, qualecunque demum ſit, medicamentum proprium? aut unam univerſalem medendi methodum? Aph. 977.

man, and in this very diſeaſe which he inſtances: for I believe he only took this notion from a hint given by SYDENHAM *. I might indeed have many ſcruples in ſetting up a theory againſt ſo great an authority as BOERHAAVE; but in practice I can have none, where the fact has been ſupported by the teſtimony of my own eyes, in many thouſands of inſtances; and no *dogma*, however reſpectable, can convince me that *Bark* is more certain in the cure of an *Ague*, than *Sudorific Medicines*, properly adapted, are in an acute *Dyſentery*, early uſed, after the firſt paſſages are cleanſed, before deep ulceration, or gangrene, has actually taken place, under every diverſity of ſeaſon, climate, and conſtitution.

In the hiſtory of the Dyſentery, many practical writers have noted the relief

* Fieri poſſit, ut variæ enaſcantur Dyſenteriarum ſpecies, ut ſunt variolarum et epidemicorum aliorum, diverſis conſtitutionibus propriæ, et quæ proinde medendi methodum in aliquibus diverſam ſibi ſuo jure vindicent. Page 181.

which

which has followed a plentiful ſweat; and that the pains and frequency of the ſtools have abated, during a free diſcharge by the ſkin. SYDENHAM'S proceſs with whey, in 1669, was effectual, becauſe it promoted ſweating. In the following years it did not anſwer, as a change had taken place in the diſeaſe, and leſs dilution was neceſſary, when it became leſs inflammatory, and, as he ſays, "had "loſt much of its ſubtilty, and proved "more humoural," and yielded to purging medicines and opiates.

FABRICIUS HILDANUS remarked, that a lady, who had taken forty grains of Lapis Bezoar, in a Dyſentery, broke out in a univerſal warm ſweat, and that all the ſymptoms abated, and ſhe ſoon after fell into a ſound ſleep, and in a few days, was intirely recovered.

LAMONIERE obſerved, that a ſweat checked the violence of the diſeaſe immediately; and BAGLIVI ſays, a ſweat happening commonly cures it.

HILLARY

Hillary was ſurpriſed that the delirium, tremors, and all other bad ſymptoms went off from a free diaphoreſis, that was raiſed by ſmall doſes of Ipecacuanha and diluting; and ſays, "we muſt "not always expect to meet with ſuch "happy ſucceſs in every patient's caſe;" yet he ſays, he had "more than twice "ſeen this method ſucceed."

But theſe inſtances, with many others, have been conſidered merely as accidental events, inimitable by art, and not materials to found a regular ſyſtem on.

Hippocrates himſelf allows the good effects of ſweats, even though they were not on critical days. He ſays, "that "though a criſis may happen by the "mouth, by ſtool, by urine, or by the "joints, yet a ſweat is a criſis common to "all diſeaſes*."

Though a criſis in fevers may be completed

* De Rat. Vict. in Morb. Acut.

pleted by ſtool, by urine, by bleeding at the noſe, or by abſceſs, yet theſe are often only the harbingers, or the followers of a criſis: but a warm, and uniform ſweat, accompanied with ſleep, never is; and is always in itſelf, invariably, if not interrupted, a perfect termination of a fever.

SYDENHAM found when a ſweat was kept up for twenty-four hours, it was the beſt cure for the Plague, and Peſtilential Fever. He ſays, "that the patient is al-"ways ſtronger while the ſweat flows; that "ſeveral, by his advice, who were kept in "a ſweat for twenty-four hours, were ſo "far from complaining of greater weakneſs "from thence, that they declared, that in "the ſame proportion as the ſuperfluous "humour was carried off, they perceived "their ſtrength increaſe. That while the "ſweat continues, the patient judges him-"ſelf in a fair way of recovery, and in the "opinion of the attendants, ſeems in no "farther danger; but as ſoon as the ſweat "ceaſes, and the body begins to dry, he "grows worſe, and a kind of relapſe is oc-"caſioned."

"casioned." He directed the sweat to be kept up for twenty-four hours, by draughts of sage posset drink, or mace ale, taken now and then; strictly cautioning against wiping off the sweat, and not allowing the patient's linen to be changed, however moist or foul it was, till twenty-four hours after the sweat was gone off; during which time he was advised to be careful not to get cold, but to let his linen dry on his body, to take all his liquids warm, and to continue the sage posset drink. The next morning a purge was given. He says, he did not lose a single patient after he began this process. P. 126, 127.

CAIUS, after much unsuccessful experience, found that the cure of even the Sweating Sickness, consisted in keeping the patient in bed, and promoting a continued, and moderate sweat for twenty-four hours: "Sudandi ministrandique "tempus ideo horis 24 definio, quod "hæc ratio fælicis tutæque curationis

"atque

"atque miniſtrationis eſſe ſolet." *De Ephem. Britan.* P. 110.

Helmont indeed goes ſo far as to aſſert, that all fevers may be cured by ſweating, and even with a ſingle doſe of one medicine.—"Unica nimirum falce amputatur omnium febrium cauſa occaſionalis. Id remedium eſt Sudoriferum. "Etenim iſtud remedium eſt Præcipitatus "Diaphoreticus *Paracelſi.* Qui omnem "ſanat febrim unicâ potione." Cap. xiv. 79.

We have not drawn all the benefit we might have done from the ſtores of diaphoretic medicines, that chemiſtry and improved ſcience have opened to us, which were ſhut to our anceſtors. Their alexipharmics were compoſed of treacles, poſſets, and heating compoſitions; which, to raiſe a ſweat, were generally aſſiſted by hot rooms, and a heavy load of bedding. Thus the circulation was forced, and in caſe a ſweat was not excited, the inward flame was increaſed, the blood veſſels ruptured,

tured, and a train of evils produced, which in the end killed the patient. From hence it is that we are furniſhed with ſuch frightful hiſtories of Bubos, Petechiæ, Exanthemata, and Carbuncles, which at this time are rarely ſeen.

When a patient is firſt covered up, and has taken his diaphoretic medicine, and drinks, in the beginning of a Dyſentery, particularly in hot climates, it may reaſonably be expected, when the perſon is young, groſs, or plethoric, that ſometimes inſtead of ſweating, he becomes reſtleſs and hot; his ſtomach loaded, and his ſkin dry: here bleeding, or an emetic is neceſſary, which never fails to diſpoſe the body to ſweat. A very ſmall quantity of blood taken away, and what almoſt any patient may ſpare without injury, or ten grains of Ipecacuanha, when the patient is weak, will generally be ſufficient to anſwer the end.

It happens ſometimes alſo in the Dyſentery, and very commonly in Fevers, that

that large doſes of James's Powder, and other Antimonials are given, and frequently repeated, without cauſing perſpiration. Here, I have found practitioners perplexed, and making wrong concluſions;—finding neither perſpiration, nor any other evacuation produced, they ſtill perſiſt in the Antimonial, and increaſe the doſe, ſuppoſing a great deal muſt do what a little will not; which only increaſes the fever and brings on delirium, unleſs a ſudden operation, upwards or downwards, breaks forth, which may endanger the ſafety of the patient.

It has always been a maxim with me, to deſiſt from any powerful or active medicine, or elſe to combine ſomething with it, where a common doſe, or quantity, has not produced the deſired effect: whether vomiting, purging, or ſweating be intended; or whether the medicine be Bark, Opium, Mercury, or Antimony.

Where Antimonials have been taken, as I have here mentioned, without a proper

effect, and where bleeding, or vomiting may be improper, a dose of Laudanum acts like a charm, and brings on immediate relaxation of the vessels, and profuse sweat. Some people mention difficulty in raising a sweat, particularly in Fluxes; but there is no difficulty in it, which the methods here related will not remove.

When the Dysentery is translated into a Fever without Flux, or has degenerated into a Diarrhœa or Tenesmus, the treatment must be regulated according to the habit of the patient, the nature of the disease, and its duration, as from any other origin. But as these diseases seldom spring from the Dysentery, when the Sudorific mode of practice has been pursued, especially when it has been early attended to, and when warm clothing and careful diet have been used until the bowels have recovered their tone, I refer to what has been written on these subjects by others, thinking it unnecessary to enlarge my publication with the cure of diseases, that a faithful adherence to the

practice it contains, will be found effectually to prevent.

Whatever opinions may have been propagated and honoured with credit they do not deserve, I think it is necessary to inform practitioners unacquainted with hot climates, that I never saw a Dysentery during my residence in the West-Indies, in which even the mildest acids were not prejudicial. Nay, I have frequently known dangerous relapses, occasioned by the patients' eating a small piece of a pine apple, or orange, and that such wines only, as are intirely free from austerity, are proper to be used in the Dysentery in those climates *.

As to *contagion* from infection in the Dysentery, I must confess I never saw an instance of it; nor can I venture to conjecture, what that agent is, which determines the species, and spreads epidemical diseases. HIPPOCRATES seems to have

* The troops in some of the islands during the war, were liberally supplied with thin, sharp, French prize wines, by way of œconomy:—this œconomy cost the nation the price of many valuable lives.

 placed

placed it in the evident changes, and cognizable ſtate of the air; SYDENHAM, to ſome inſcrutable influence, and imperceptible quality of it.—If SUCH DOCTORS diſagree, " who ſhall decide?"

It has often happened that hundreds of men in a camp have been ſeized with the Dyſentery, almoſt at the ſame time, after one ſhower of rain; or from lying one night in the wet and cold. People under ſimilar circumſtances of clothing, air, water, diet, and ſituation, muſt be ſubject to ſimilar diſeaſes, as far as conſtitution and habit of body are ſimilar:—and yet it often happens that the Dyſentery begins with a few people, and ſpreads itſelf by degrees, until a multitude are affected, and the diſeaſe becomes general.

It is incredible, that the ſmelling a little human blood, that had ſtood ſome months in a phial, gave the man a Dyſentery, mentioned by PRINGLE *: or that the perſon FORRESTUS ſpeaks of got the Plague, by only putting his hand

* Page 255. Oct. Ed.

into

into an old trunk *: or that the ſhaking an old feather bed, which had laid by ſeven years, raiſed a plague at *Wratiſlau*, which deſtroyed 5900 perſons in twelve weeks, as related by ALEXANDER BENEDICTUS †: ſo is the ſtory of the leather coat of FRACASTORIUS ‡, and the hogs of BOCCACE §.—Such things may be true, but when probability is ſhaken, reaſon inclines to ſcepticiſm.

I am far from ſuppoſing, that any writer of character aſſerts what he himſelf diſbelieves;—nay, I do not doubt that even PARACELSUS was in earneſt, when he ſaid, "Mulier ſub aſcendente malitioſa "genita, infantem in cunis, per aſpectum

* Lib. VI. Obſerv. 22. † Cap. 3.

‡ Lib. II. Cap. 7, De Morb. Contag. He ſays 25 Germans got the plague, and died, by putting on an old leathern coat, one after another, infected by the plague at Verona, in 1511.

§ *Giorno Primo*; in which he ſays, that during the plague at *Florence* in 1348, two hogs fell into convulſions, and died within an hour, only by tearing and ſnuffing upon ſome rags that had been worn by a man who died of the plague.

"et verba incantare poteſt; ſic fieri quo-"que perfacilè poteſt, hominem unum "alteri hunc morbum per imprecationem "infligere poſſe." *De Peſtililate, Tract.* 2. *Cap.* 2.

We obſerve in camps, hoſpitals, &c. that thoſe people whoſe dirty employments ſubject them in a particular manner to a depravation of their habit, ſeldom eſcape the preſent epidemic; and this gives riſe to the vulgar, and very incorrect notion, of *catching* the diſeaſe.—And, we obſerve, that others, from the ſlighteſt deviation from regularity, loſe the power by which the body reſiſts diſeaſes, and they are alſo attacked. But theſe effects are not to be attributed to infection, for thoſe people, who keep the vital and animal powers in uniform confederacy, by temperance and calmneſs of mind (for fear, by lowering the vital energy ſubjects the body to diſeaſe), nouriſhing diet, proper clothing, and cleanlineſs, and by keeping a free and regular paſſage open for all the excretions, are proof againſt the aſſaults of foul and peſtilential

peſtilential air. Such people ſeldom ſuffer, even by the plague itſelf; while all around them periſh. In Conſtantinople, the plague, and filth and neglect, the effects of Mahometiſm and predeſtination, generally go together, and are ſeldom met with aſunder.

It ſhould follow, if contagion was ſupported by infected bodies, that no perſon ſhould ever eſcape infection (as at Oxford aſſizes in 1577), who was within the ſphere of its action; and that thoſe who were intirely ſecluded from it, and free from all contiguity to infected people, or ſubſtances (as the Collegers were in the town of Cambridge when the plague was laſt in England), ſhould be exempt from it.

But in oppoſition to this, RHAZES lived 120 years, and often practiſed in plagues. HODGES remained in town and attended the ſick, during the great Plague in London, in 1665. KAYE was in the midſt of practice in the Sweating Sick-

neſs, in 1551, without any inconveniency. Procopius informs us, that during a terrible Plague at Conſtantinople, in 543, which almoſt deſtroyed the whole city, no phyſician, nor other perſon, got the Plague by attending, dreſſing, or touching the ſick *. Yet moſt of the Capuchins, the Jeſuits, the Recollets, the Oſervantines, the Bare-footed Carmelites, the Reformed Auguſtines, all the Grand Carmelites, the Grand Trinitarians, the Reformed Trinitarians, the Monks of Loretto, of Mercy, the Dominicans, and Grand Auguſtins, who kept themſelves ſecluded in their ſeveral Convents, and took every precaution to avoid the Plague, while it raged at Marſeilles, periſhed by it †.

There are no epidemical nor contagious diſeaſes, that attack every perſon who breathes the ſame air, or that is in contact with the infection; elſe whole re-

* De Bello Perſico, Lib. II. Cap. 22.

† Journal de la Contagion a Marſeilles. P. 42.

gions

gions would be intirely depopulated. The habit muſt be graduated, or adapted, for the reception of a diſeaſe. In ſome conſtitutions of body the acceſs is eaſy, in ſome difficult, and in others impoſſible. But where the revelation of this myſtery is to be found, no one can tell.

To people who have never ſeen the rapidity with which the Dyſentery, in its worſt degree, makes its ravages in hot climates, that ſaving of time which I propoſe, and followed in my practice, by deriving a double operation from Antimonial Purgatives, or Emetics, and Ipecacuanha, by always keeping the patient in bed, or well covered with a blanket and diſpoſed to ſweat, as ſoon as he had taken thoſe medicines, may ſeem unneceſſary.

The time was, when it certainly would have been thought of with horror*; and there may be ſtill, for aught I know, ſome remains of that ancient ignorance,

* *Winſlow* proſtrated himſelf before the altar, for having ventured to give a patient *two ounces of manna* for one doſe.

which

which has ſeen the good effects of a vomit of Ipecacuanha, a little toaſted Rhubarb, and an Anodyne Draught.

If any ſuch opinions yet remain, it is not my intention to contend with them; nor with devotees to ſettled terms, and foes to innovation, who may think that a vomit, a purge, or a diaphoretic, ought each to have its regular bedſide period, and that nature, like themſelves, cannot be forced to do two things at once.

Neither ſhall I contend with HELMONT and his followers, concerning the moral cauſes of fevers; nor with CAMPANELLA and his followers, who pretend that a fever is no diſeaſe,—for I know that even HIPPOCRATES, CELSUS, and SYDENHAM do aſſert that it ſometimes proves ſalutary, and is often the inſtrument which nature employs to expel morbific cauſes from the body. The former opinions are incomprehenſible to me; and the latter I conſider as a *norma loquendi* among phyſicians, which cannot apply to original, nor even to ſymptomatical fevers, unleſs it can be proved

proved that nature always juſtly proportions the means to the end, and that people never periſh under her hands.

Whatever may be the moral neceſſity of one evil in the works of nature to remove another, or the utility of ſuch remedies as fevers, of which people die, I am of opinion, that diſeaſes ſhould ſeldom be left to nature, and I am confirmed in this opinion by SYDENHAM, who took ſome diſeaſes intirely out of her hands, when her methods were uncertain, and ſucceeded, and gave them a ſpeedy termination.

For my part, I have no opinion of nature as a medical deſpot, nor of obſequious phyſicians as her miniſters; which may be thought hereſy in the Temple, where the High Prieſt himſelf ſays, Νούσων φύσιες ἰητροί*. Nature, in her beſt manner, is tedious in the cure of diſeaſes; and even when aſſiſted by HIPPOCRATES, took fifty-one days to cure *Pythodorous* of a fever.

* *Nature cures diſeaſes.* De Morb. Vulg. Lib. VI. Sect. 5.

a fever. Where her ſhorter methods are purſued, unobſtructed, how precarious are her attempts; and what breaches are often made in the body, and what deſtruction of parts follow, by hæmorrhage and abſceſs!

The ſcience of phyſic muſt be conſidered as extremely imperfect, and literally "ars conjecturalis," until we can take a diſeaſe intirely out of the hands of nature; and ſet up, or take away, ſuch operations in the body, as are neceſſary to terminate diſeaſes when, and how we pleaſe. This I know may be done in many endemical diſeaſes; and ſuch as are conſtant in their appearance; and ſuch as are the produce of certain places, and ſtated ſeaſons of the year.

Wherever this practice is uſed, the doctrine of critical days, ſo holily obſerved by the ancients, makes but a ſmall figure in the healing art; and will be as little regarded, or relied on, when followed in temperate climates, as it is in polar and equatorial regions.

Nature,

Nature, in the torrid zone, ſeldom cures any diſeaſe;—all acute diſeaſes are found to make a regular, but haſty progreſs to death. There all the oracular prognoſtics of the divine old man, are not ſo confidently to be relied on, in fevers, as four or ſix hours ſound ſleep, accompanied with a warm, univerſal ſweat;—but it requires the exertion of conſummate ſkill, to protect nature from the fury of the diſeaſe, until this compoſure is obtained.

However adequate the trifling practice, in common uſe, may be to the conquering of ſlight Fluxes, ariſing ſolely from *ſtimuli* in the inteſtines, and may accord with the conveniencies and ſituations of the higher ranks of people in luxurious life, it is otherwiſe when applied to thoſe with ſerious diſeaſes, in inferior ſtations, and in indigent circumſtances; and never ſhould be thought of where great maſſes of people are crowded together in jails, hoſpitals, ſhips, and armies.

The miſeries of war, and the ſufferings

ings of confinement, are too great and numerous, to be long ſupported under ſickneſs; and even in health, was it not for ſome magic influence, with which hope deludes and appeaſes care, the former would never be attempted, nor the latter endured.

Curing diſeaſes in an army, and in hot climates particularly, is never well done, unleſs it be done quickly. There are no conveniencies for long ſickneſs, where a ſoldier's bed is often only a blanket, and all his neceſſaries contained in his knapſack. The attacks of diſeaſes are here always violent, and ſudden;—and the cure, if poſſible, ſhould be *jucundè*,—but it muſt be *citò*, if at all. For the diſeaſes of one, or two days in an army, have ſometimes defeated, and often nearly ruined, many of the greateſt atchievements in the annals of mankind.

In 1743, on the 27th of June, the night after the battle of *Dettingen*, a heavy ſhower of rain fell, preceded by very hot and

and dry weather, which the Engliſh troops, lying all night on the field of battle without tents were expoſed to, and the night following encamped on wet ground. In leſs than eight days, five hundred men were ill with the Dyſentery, and within ſix weeks, half that army was, or had been, afflicted with it.

In, 1741, in the month of April, the army with VERNON and WENTWORTH was reduced, in two days time, from 6645 men to 3200, as they lay encamped after the battle of *Saint Lazare* at *Carthagena.*

In 1650, in the month of September, OLIVER CROMWELL'S army was ſo reduced by fluxes, from a few days rain, before *Dunbar*, that he had, probably, never been Protector of England, if the Lord had deferred delivering the Scotch army into his hands, a few days longer*.

* When *Cromwell* ſaw the Scotch army in motion, he ſaid, "the Lord is going to deliver them into our hands."

On

On the 23d of October, 1415, our great HENRY the Fifth, with his English archers, would not have "affrighted "the air at Agincourt*," if vanity had suffered the French to remain quiet; and had the battle been delayed another week, his whole army would have been ruined.

He embarked with 50,000 men from *Southampton*, on the 18th and 19th of August 1415, and landed at *Havre de Grace* on the 21st. He marched to *Harfleur*, besieged, and took it. During the siege, which was not six weeks from the time of his leaving England, he lost nearly half of his army by the Bloody Flux. Two thousand died of it in one day. *Rapin* says, "the Flux, which was got "among his troops, had made, and still "did make, such ravage, that not above "the fourth part of his army were able "to bear arms. This distemper had not "seized the common soldiers only, but

* *Shakspere*, Hen. V. Chorus, Act I.

"even

"even the moſt conſiderable perſons were "not free from it. The *Biſhop of Norwich*, and the *Earl of Suffolk*, were already dead of it. The *Duke of Clarence*, "the King's brother, the *Earl of Arundel*, "and ſeveral other officers of diſtinction, "were ſo dangerouſly ill, that they were "obliged to return to England in hopes "of cure."

ON THE

DYSENTERY.

PART III.

AT firſt, when I determined on this publication, it was my intention to have given a ſpecimen of the practice of every author of reputation, who had written on the Dyſentery, that thoſe who are remote from the advantage of libraries, might have, in a ſmall compaſs, all the information that has been ſuggeſted in different parts of the world, on this important diſeaſe, that lies ſcattered through a multitude of books; which I thought would extend the utility of a publication of this ſort as much as poſſible.

 But

But the Dyſentery, being a ſubject ſo univerſally diſcuſſed among phyſicians, and on which one would imagine it was diſgraceful to be ſilent, I found by farther inveſtigation, that the ſmalleſt extract from every author who has written thereon, would be a voluminous work of itſelf, and of more curioſity than utility. Therefore I have collected only the moſt intereſting circumſtances that have occurred to me in the courſe of my reading on the Dyſentery, which I flatter myſelf, though I have abridged my original plan, will be of uſe to young practitioners, in the navy and army, and reſidents in the colonies; and that it will alſo ſave much trouble to thoſe who have but little leiſure, and many opportunities of making and comparing obſervations on this diſeaſe, in various climates, and who proſecute their inquiries with an intent to publiſh them.

Indeed there is ſo little uſeful diſcrimination on this diſeaſe, to be found among writers after GALEN, that if we except TRALLIAN, the reſt are very little more than

than compilers;--or copiers of GALEN, who was himſelf a copier of the ancient Greeks; and thoſe of later times, commentators on their predeceſſors; deſcanting on their practice, and diſputing concerning the uſe, and abuſe, of Acrid, and Unctuous Glyſters, Bleeding, Vomiting, Purging, Fruit, Aſtringents, Opiates, &c. and in more recent times, about Contagion, Rhubarb, Ipecacuanha, and Saline Medicines.

From the moderns, all that I can collect amounts to no more than this:—That different practitioners having ſeen the diſeaſe under different circumſtances, conclude that every perſon beſide themſelves has been miſtaken reſpecting the true method of treating it.

One phyſician has ſeen the Dyſentery attended with great Fever, and he inſiſts that copious Bleeding, by way of evacuation, is the cure for it; and quotes TRALLIAN, or BOTALLUS, for his authority.

Another has ſeen an Autumnal Dy-

ſentery in marſhy ſituations, and inſiſts that bleeding is pernicious; or, if performed, that it ſhould be done in very ſmall quantities, by way of Revulſion; and quotes GALEN, AETIUS, and TRALLIAN for that.

Another has ſeen the Dyſentery abounding with Bile, and acrid diſcharges, and declares that fruits and purging are the cure; and quotes TRALLIAN's example there alſo.

Another has ſeen the Dyſentery where crudities and foul-humours have prevailed in the firſt paſſages, and inſiſts that fruits are deſtruction; and ſays HIPPOCRATES has forbidden them in all diſeaſes of the bowels.

Thus we have been furniſhed, in different parts of the world, with books ſupporting every hypotheſis, that contradiction and local prejudice could invent; without the ſmalleſt conceſſion, that theſe contentions concern but

but accidental ſymptoms, that will ever be ſubject to variation; and that the principles of the diſeaſe itſelf muſt be attended to on far other grounds than theſe.

It was not by ſuch methods that SYDENHAM raiſed his fame. What a figure would he have made, if, after his ſucceſs with *whey*, by which he cured all his patients in the Autumn of 1669, he had publiſhed to the world that *whey* was a certain remedy for the Dyſentery, when in the following year, nay, in the cold weather of the ſame year, he found it had no effect?

He would have been obliged to have contradicted himſelf; or to have copied *Vander Heyden*, who had written on the ſubject, and to have remained the author of a monſtrous abſurdity.

In the following ſelection, it will appear, that I have omitted a multitude of wri-

ters; but I believe none, who, however judicious, have any claim to originality.

HIPPOCRATES, the great maſter of our art, ſays, among the general and particular cauſes of Dyſenteries, that after an unuſually dry Winter, with Northerly winds, if a rainy Spring ſucceeds, with Southerly winds, Dyſenteries will prevail in the Summer; particularly among women, and people of a moiſt habit *. That after a Winter with Southerly winds, rainy and mild, if the Spring ſhould be very dry, with Northerly winds, Dyſenteries will prevail †. That long continued dry weather will produce Dyſenteries ‡. That Dyſenteries may ariſe from bile and phlegm falling on the bowels, and there corroding and ulcerating them §. That black bile may cauſe Dyſenteries; then they prove mortal ||.

* Aphor. 11. Sect. 3.

† Aphor. 12. Sect. 3.

‡ Aphor. 16. Sect. 3.

§ De Affect. Lib.

|| Aphor. 24. Sect. 4.

That

That a Diarrhœa may cauſe a Dyſentery *. That people paſt their youth are moſt obnoxious to Dyſenteries †. And that a plethora, from the loſs of a limb, by amputation, may cauſe a Dyſentery ‡.

In reſpect to his practice in the Dyſentery, the following is a ſpecimen:

"℞. Fabarum purarum quadrantem, "et duodecim Rubiæ Surculos tritos ad-"miſceto et coquito, et ex pingui aliquo "delingendum porrigito." *De Rat. Vict. in Morb. Acut.*

He adviſes warm fomentations to be applied to the belly, when the pains are ſevere, and to give glyſters of milk; and when there is fever, to uſe emollient and unctuous glyſters often, to diſcharge the ſharp humours. Milk was his general medicine in the Dyſentery. Aſſes milk, goats milk, or cows milk. Sometimes

* Aphor. 77. Sect. 7.
† Aphor. 30. Sect. 3.
‡ De Articulis.

he gave crude milk; ſometimes boiled milk; and ſometimes milk with hot ſtones quenched in it *.

In Aph. 64. *Sect.* 5. he admoniſhes againſt giving milk, when there is any pain in the head, and when there is fever and thirſt; and where there is a copious diſcharge of blood, or a bilious purging, with an acute fever.

In the writings of this venerable man, there is a paſſage relating to the Dyſentery, concerning the meaning of which, the learned have diſputed.

Πορνείη ἄχρωμος δυσεντερίης ἄκος †.

Scortatio turpis Dyſenteriæ medela eſt ‡.

Impudens ſcortatio difficultati inteſtinorum medetur §.

* I have omitted the treatment of the ſon of ERATOLAUS, in *Lib. VII. Sect.* 5. *de Morbis Vulgaribus*, as that more than ſeventy-one days illneſs was cured principally by aſſes milk at firſt, and cows milk afterwards, with ſome auſtere black wine in it.

† *Epidem. VII. Sect.* 134. ‡ CORNARIUS. § FOESIUS.

 CALVUS,

CALVUS, the firſt tranſlator of HIPPOCRATES into Latin, from the Vatican manuſcript, reads Πόρνη, *Meretrix*, inſtead of Πορνείη, *Fornicatio*; and ſuppoſes ἄχρωμος to be the name of a woman who had a remedy for the Dyſentery, and tranſlates the paſſage thus:

Meretrix Achromos Dyſenteriæ Medela.

DACIER is of opinion that HIPPOCRATES has been made to ſay what he never intended; and thus tranſlates the paſſage:

La fornication eſt un méchant et déteſtable remede à la Dyſenterie.

He alleges, that the reading ſhould be ἄχρωμον, inſtead of ἄχρωμος, and agree with ἄκος; and that ἄχρωμος is an old word, and not to be found in any author but HIPPOCRATES and ARTIMEDORUS; and that it has no certain and determinate meaning.

SUIDAS explains it *immodeſt*, *imprudent*, but

but that it alſo ſignifies *deteſtable* and *wicked*; as ἄχρωον, which is the ſame as ἄχρωμον, is explained by HESYCHIUS, πονηρὸν, wicked. *Remarques ſur le troiſieme livre de la Diete.*

LE CLERC ſupports DACIER's opinion. *Hiſt. de la Medicine, Lib. III. Cap.* 30.

Whatever may have been the original text, in this paſſage, or the real opinion of HIPPOCRATES concerning a remedy, "en "ce qu'il bleſſe l'honêteté et la bienſéance," we find a ſimilar alluſion in another part of his works *; and an unequivocal deciſion on this point in the learned STAGIRITE. Διὰ τί τὰ ἀφροδίσια τὴν κοιλίαν ψύκει καί ξηραίνει †; and indeed, in obſtinate Diarrhœas, many others have adverted to the ſame circumſtance.

"Alvi profluvia invetera aliquando per "Venerem reſiccantur ‡."

* De Morb. Vulg. Lib. VI. Sect. 5. Aph. 26.
† Prob. XVIII, Sect. 4.
‡ *Aetius*, Tetrab. 1. Serm. III. Cap. 8.

"Alvi

"Alvi profluvium inveteratum Venus "reſiccat ‡."

Celsus, *Lib. IV. Cap.* 15. ſays, Among the diſeaſes of the inteſtines may be reckoned the Tormina, by the Greeks called δυσεντερία. In this diſorder the inteſtines are exulcerated on the inſide: blood flows from them, mixed with fæces, which are always liquid: ſometimes with a kind of mucous excretions, and ſometimes caruncles are diſcharged with excrements: there is a frequent deſire of going to ſtool, with a pain in the anus: ſome inconſiderable diſcharge is made with the ſame pain, and the torment becomes more intenſe; which, however, after ſome time, is alleviated: the patient has very little reſt; his ſleep is interrupted; he becomes feveriſh; and after a conſiderable length of time, either periſhes under the inveteracy of the diſtemper, or

‡ *Paul Egineta*, Lib. I. Cap. 35. et *Amat. Luſitan.* Cent. II. Obſ. 47.

eſcapes with much difficulty and torment.

First of all, the patient muſt have reſt; for all agitation promotes the exulceration of the parts. Then he muſt drink, faſting, a cup of wine in which the bruiſed root of cinquefoil has been added. Apply repellent cataplaſms to the belly. As often as he goes to ſtool, let him waſh with a decoction of vervain. Let him eat purſlain boiled, or out of ſtrong pickle, and uſe an aſtringent diet.

When the diſeaſe is farther advanced, he adviſes glyſters of cremor of ptiſan, or milk, or melted fat, or ſtags marrow, or oil, or butter of roſes, with the raw white of an egg, or decoction of linſeed; or, if ſleep be wanting, with the yolks of eggs in a decoction of roſe leaves. He ſays, theſe things mitigate the pain, and are of great benefit when there is a loathing of food. He ſays, *Themiſon* uſed ſtrong brine in ſuch caſes.

The

The food to be ſuch as gently binds the belly: diuretics are ſerviceable if they have their proper effect, by diverting the humour another way, otherwiſe they increaſe the diſeaſe; for which reaſon they are not to be given, but to ſuch people as have been accuſtomed to receive benefit from them. The common drink, if the patient is feveriſh, ſhould be pure warm water, or water endowed with an aſtringent quality: or if there be no fever, thin, auſtere wine. If, after ſeveral days, the patient finds no relief from theſe things, and the diſeaſe grows inveterate, he adviſes the drinking of water of a good degree of coldneſs, which he ſays aſtringes the ulcers, and lays the foundation for a recovery; but when the purging is ſtopped, the patient is to return immediately to his warm drinks. When a putrid and fœtid ſanies is diſcharged, or pure blood comes away in the ſtools, the belly is to be well cleanſed with glyſters of hydromel, and thoſe other remedies before-mentioned. He ſays, an effectual

effectual remedy againſt a cancer of the inteſtines is a lump of minium bruiſed, with half a pound of ſalt; or a glyſter of the ſame with water. If blood be voided in the ſtools, the patient is to eat and drink ſuch things as are of an aſtringent quality.

DIOSCORIDES, Τῶν περί τα ἔντερα παθῶν Βοηθήματα, recommends in the Dyſentery, among a multitude, the following remedies, with wine, or ſome aſtringent decoction:—Agallochum, ſage, juice and herb of hemp agrimony, the juice and dried root of cinquefoil, hypociſtis, juice of horehound, pimpinella leaves and root, willow root, comfrey root, ſeed and leaves, wild ſorrel ſeed, water lily ſeed, decoction of marſhmallow root, bramble buſh juice and ſtalks boiled, goats milk boiled, vervain, cudwort with auſtere wine, elatine boiled with linſeed, agrimony ſeed with wine and honey firſt boiled, wild fennel ſeed, white ivy flowers with wine twice a day, myrtle berries with wine, lotus boiled

boiled in wine, lemnian, or ſinopian earth in wine, wild ſage root with wine, œnanthe, bull ruſh ſeed toaſted, chondrilla juice, orris with wine, mullen root, flea wort in water, dry album græcum moiſtened with wine, coagulum of a hare in water, &c.

Among the articles of food, are mallows without ſalt, ripe freſh olives, blood of a goat, deer, or hare fried, dry ripe grapes, unripe dry grapes made into bread with flower, bread toaſted and yolks of eggs, ſtarch boiled with chondrus and milk, blackberries, plantain leaves and green tender branches of bramble buſh boiled and taken with vinegar and oil, galls, or rhus mixed with the food, zea roaſted, lentiles roaſted and powdered, grape ſtones powdered, millet, zea, rice, and lentiles toaſted, græcian beans boiled in poſca, linſeed fried and eaten with honey, honey boiled, taken alone or with pomegranates, quinces and ripe medlars boiled with honey, myrtle wine, juice of myrtle-berries, wild pears, ſuccory, parſley

and plantain boiled in vinegar, pomegranate ſhells, walnuts, dates, purſlane, deers fat boiled with cheeſe, or flower, the liver and brain of a goat fried with honey, new cheeſe ſcraped and fried with honey, young ſwallows roaſted, bees wax, or honey-comb boiled in the drinks, cabbage twice boiled, raw unwaſhed lettuce, where there is a loathing of food, the coagulum of a young hind, hare, or kid, diſſolved in water and drank, &c.

Cataplaſms to be applied to the belly, compoſed of oleaſter flowers, and barley-meal, mixed with warm oil and water; bramble buſh leaves, quinces, and cerate; myrtle leaves beat up with wine and oil of unripe olives; pomegranate ſhells boiled in wine with cerate; barley-meal, bramble buſh, and wine; alum, with aloes and acacia, &c. &c.

Glyſters of freſh butter, and others compoſed of decoctions of mallows, fenugreek ſeed, &c. when there is no pain, pickle, with wine; burnt hartſhorn, with wine and oil of roſes; arſenic, twice burnt with paper,

paper, and wine; ſcoria of lead with myrtle oil; bitumen, melted with ptiſan, &c. where there are eating ulcers, fiſh pickle; old urine; decoction of Greek beans with goats ſuet; red earth with aſtringent decoction, or ſharp brine, &c.

To aſſuage the griping pains excited by acrid glyſters, others are to be given compoſed of milk, or butter, or decoction of chondrus; or of ſuet with cremor of ptiſan, alſo fat of fowls, geeſe, or deer; or marrow of a deer or calf, by itſelf warm, or with cremor of ptiſan.

In his chapter on milk, he recommends boiled milk, and milk with hot flints quenched in it, for Fluxes and Ulcerations of the Inteſtines.

GALEN ſays, an eating or ſharp humour is the cauſe of the Dyſentery, which at firſt abſterges, then abrades, and at length ulcerates the inteſtines, *De Locis Affectis, Lib. I. Cap.* 2. That it may be cauſed by acrid phlegm, or by yellow bile, or by black bile. And that it may ariſe

 from

from a plethora, in which nature relieves herself by the inteſtines. *Lib.* HIPP. *de Nat. Human. Comment. I. Sect.* 33. From the loſs of a limb, from indolence after an active life, from an obſtruction of the menſes. *De Locis Affectis, Lib. V. Cap.* 7.

He confirms the opinion of HIPPOCRATES, that a Dyſentery ariſing from black bile is mortal; and obſerves, that an ulcer from black bile muſt be mortal, unleſs the unſound parts, are cut intirely away from the ſound, which cannot be done in the inteſtines. *De Atra Bile, Cap.* 5.

In the treatment of the diſeaſe, he ſays, it contributes greatly to the cure of the diſeaſe, to know in what part of the inteſtines the ulcer is ſituated; for if it is in the ſuperior inteſtines, the remedy is to be ſought for in medicines which are to be taken by the mouth; but if the ulcer is in the inferior inteſtines, it will be moſt proper to have recourſe

recourſe to glyſters. *De Locis Affectis, Lib. VI. Cap.* 2.

He expreſsly forbids bleeding in the Dyſentery; and ſays, in *Comment.* 116. *Lib. IV. Vict. Rat. in Morb. Acut.* "Fluente alvo ſanguinem non detrahes; nam ſi poſt detractionem perſeverat fluor, virtutem proſternit." And in *Lib. I. Cap.* 14, *ad Glauconem*, he makes the ſame objection againſt purging; he ſays, "neque, ſi fuerit febris cum profluvio ventris, alia eſt opus evacuatione; verum hæc ſola ſufficit, quamvis non ſit pro multitudinis ratione. Quicunque enim his plus adimere fore neceſſarium putantes, aut ſanguinem mittere, aut ventrem movere tentaverunt, in graviora pericula duxerunt."

In *Lib. X. de Simpl. Med. Facult.* he recommends milk glyſters to abſterge and cleanſe the inteſtines, and to be taken inwardly, in Fluxes cauſed by ſharp corroding humours. He ſays, it is the beſt remedy in the Dyſentery, and all

acrid Fluxes of the belly. He advises, to make it more astringent, to be first boiled, to consume its serous parts, and to have hot irons, or hot stones, κάχληκας, quenched in it, particularly hot irons.

The anti-dysenterical medicines of GALEN, as well as those of his predecessors, contemporaries, and successors, down to the sixteenth century, were nearly all alike, and chiefly composed of the following articles:

In glysters they used, as detergents and astringents, arsenic, burnt paper, brine, lime, alum, sea water, wine, opium, &c. In assuaging and emollient glysters, milk, wax, goats fat, and the fat of other animals, flower, starch, &c. With such internals as galls, tormentil, acorns, chesnuts, opium, cheese, saffron, alum, coagulum of animals, eggs boiled in vinegar, austere wine, astringent fruits, album græcum, burnt hartshorn, earths, boiled milk, chalybeated milk, and milk with hot stones quenched in it; with external applications, cataplasms, fomentations and baths.

The

The following ſpecimen of GALEN's formulæ, from *Lib. IX. Cap.* 5. *de Compoſ. Pharmac. ſecundum locos*, with the particulars already mentioned from DIOSCORIDES, may give an adequate idea of the practice of thoſe times: and ſuperſede the neceſſity of repetitions from ſubſequent writers, many of whom have done nothing more than copy them, without the addition of a ſingle article of the ſmalleſt utility. If any further information is required, reſpecting the formulæ of the ancients, it may be found in the collection made by NICHOLAS MYREPSUS.

Ad Dyſentericos qua UTOR.

"℞ Gallæ, fructus ericæ, opij, ſingulorum drachmas quatuor cum aqua redigito in paſtillos duorum obulorum. "Dato ex aqua aut vino."

Ad Dyſentericos, Cæliacos, et Hæmoptoicos, è CORNELIO *Medico.*

"℞ Myrrhæ, thuris, aloes, croci, opij, "rhois, ſyriacæ, et coriariæ, lycii indici,

" acaciæ, malicorii, ſucci hypociſtidis, gal-
" læ, balauſtiorum, ſingulorum par pon-
" dus; in paſtillos cogito, et ad noctem,
" febre carentibus ex vino, febricitantibus
" ex frigida, dato."

Infuſum quo UTOR.

" ℞ Chartæ uſtæ ʒxxx. Auripigmenti
" ʒxij gallæ ʒix. Calcis vivæ ʒxvi. Bi-
" tuminis ʒxvi. Sulphuris vivi ʒxvi.
" Sandarach ʒxvi. Miſce."

Aliud, quo UTOR, GEMELLI.

" ℞ Auripigmenti ʒviii. Sandarach ʒiiii.
" Calcis vivæ ʒviii. Squamæ æris ʒvi.
" Aluminis ſciſſi, omphacii, lycii indici, āā
" ʒviii. Succi papaveris, hypociſtidis āā
" ʒiii. Croci ʒii, ego autem ʒiiii. Chartæ
" uſtæ ʒxx. Aliqui ʒxv. Exipe vino myr-
" tite, fac globulos, quorum ſinguli ſint
" ʒiii et ʒiiii. Infunde cum vino diluto."

GALEN ſays, it was a cuſtom in his time to give raw onions and bread, the patient drinking but little, and the

next

next morning glysters of the sharpest pickle. This remedy, he says, brought on convulsions, faintings, and cold sweats, and killed many people: but those who could survive its violence, were speedily cured by it. Here he gives us a proof of his excellent wit, as well as of that profound judgment for which he is so justly famed. He makes proper reflections on this sort of practice, and also points out the danger of the improper use of anodynes. *Method. Medend. Lib. XII. Cap.* 1.

ORIBASIUS, *Synops. Lib. I. Cap.* 19, recommends glysters of sea-water.

AETIUS, *Tetrab. III. Serm.* 1. *Cap.* 43 *et seq.* advises rest and a spare diet; and rain water for use, that has not been received by lead gutters, or cisterns, as such water causes Dysenteries. If rain water cannot be had, good spring-water must be used; but well-water should be avoided, as it abounds with

with ſaline properties which diſturb the bowels.

If the diſeaſe is cauſed by acrid food, or yellow bile, it is generally cured. And if black bile in the beginning is voided, which is diſcharged into the bowels, in conſequence of the ſolution of ſome fever, we muſt not deſpair of a cure; but if ſpontaneouſly, and without any fever preceding, black bile is voided, and no good concoction appearing, the Dyſentery is incurable, as it does not differ from an ulcerated cancer, and is always mortal.

Antyllus relates, that a perſon having ſwallowed a gold ring in joke, voided ſhreds and bloody ſtools, cauſed by the aſperities of the ring cutting the inteſtines; but by boldly giving him ſtrong purgatives, he voided it by ſtool, and was well the third day.

Aetius ſays, it is wonderful what good effects are produced by ſuch plaſters

ters as are ufed to bleeding wounds, after the inflammation is abated, and fuch as are ufed for fractures, applied round the whole belly and loins, to the back.

If the impetus of the blood is vehement, with great inflammation, and particularly in plethoric habits, bleeding muft be performed, if the ftrength will permit, and where any accuftomed difcharge of blood has been fuppreffed. Much blood is not to be taken away at a time, nor fuddenly; both difturb the belly: and great care muft be taken that the patient is not funk by it. The intention of bleeding is not for the quantity of blood, but as it were to transfer the humours to another channel. A little blood, therefore, and from a fmall orifice, taken away flowly, mitigates the inflammation, caufes a revulfion of the blood from the inteftines, abates the inward heat gradually, and conduces to fleep, rather than to fink the patient; and fleep is the beft remedy for dyfenteric people.

When the ulcers are cancerous and malignant, what the Greeks call κακοήθης, the diſeaſe is generally incurable: but the beſt remedy to mitigate the pains is freſh aſſes milk drank warm; and if the patient could bear the uſe of it, he ſhould take no other nouriſhment.

MARCELLUS EMPERICUS, *de Medicament. Lib. Cap.* 27, adviſes, puppies, ducks, and frogs to be applied to the belly, which, he ſays, will draw out the diſeaſe, and they will be killed by it, but the patient will be cured. He adviſes, the belly of the patient to be anointed with bat's blood, and to be given human urine, and to put his legs in cold water, up to his knees, and drink very warm auſtere wine, which if there is no fever will ſpeedily cure him. He ſays, that *Glaſs* powdered very fine, and ſifted, with an equal quantity of maſtic, given in boiled wine for three days together, or longer, if there be occaſion, is a wonderful remedy.

PAUL

Paul. Ægineta, *de Re Medica, Lib. III. Cap.* 42, ſays, a Dyſentery is an ulceration of the inteſtines. When much blood is voided by itſelf, the diſeaſe is called a *Bloody Dyſentery.* When blood is voided that is blacker than its natural colour, and ſhining, the liver does not properly concoct the aliment that is diſtributed to it; and when alſo from its debility, the diſcharges are like the waſhings of raw freſh meat, it is called an *Hepatic Dyſentery.* He adviſes, where there is great heat, the eating of Succory, and the drinking of cold water. He recommends rain water for uſe. If the Flux continues obſtinate, he adviſes a large ſponge to be wetted in ſome hot aſtringent wine, and to be applied to the whole of the ſuperior part of the belly.

Alex. Trallianus, in *Lib. VIII. Cap.* 8. *de Dyſenteria quæ Rheumatica dicitur,* ſays, he calls that a Rheumatic Dyſentery, that ariſes from the humours diſcharged from the meſaraic veſſels; and

and a reflux of the chyle, which being mixed with the bile, causes an acrimony that excites the intestines to expel their contents. He says, if the disease continues long, it causes an ulceration of the intestines, which is properly called a Dysentery. He advises abstinence, the first two days of the disease, and if the patient is young and strong, and the season permits, bleeding in the arm, and not a less quantity than two *heminas* (nearly twenty ounces) of blood is to be taken away. The cure afterwards was chiefly performed with milk.

He says, many unskilful physicians do not hesitate to give medicines in the beginning of the disease, composed of opium, henbane, black poppy, or mandragora, to procure sleep, and ease the pains. They are deceived from the patient's sleeping all night, and the stools ceasing; but when the morning returns, they find their labour is in vain; for the humours being collected, are now expelled without intermission, with great heaviness in the head, loss of strength,

and

and an increaſe of the Flux. Therefore ſuch medicines ſhould not be given without great neceſſity.

He condemns ſweet fruits, as they cauſe wind, and from their humidity, eaſily generate acidity: but he adviſes aſtringent fruits *.

In *Cap.* 9. *de Inteſtinorum Ulceratione, quæ propriè Dyſenteria Græcis dicitur*, he ſays, the ancients called thoſe Dyſenteries in which neither the liver, nor any other part was affected, but only the inteſtines, with an ulceration. When the diſeaſe is in the upper inteſtines, the cure muſt be performed by medicines taken by the mouth. When it is in the lower inteſtines, or about the rectum, it muſt be cured by glyſters. Therefore it is firſt neceſſary to have a proper idea of the diſeaſe;—for he that knows a diſeaſe beſt, will beſt know how to cure it.

* Theodor. Priscian is another author who terms the Dyſentery an *ulceration of the bowels*, with a *rheumatiſm*.

When

When the diſeaſe ariſes from an abundance of vitious humours, where the patient ſeems relieved by the ſtools, and where aſtringents have been uſed, and the purging increaſed afterwards, bleeding is not improper, and ſometimes purging. But when bleeding is performed, it ſhould be done gradually, at different times, and in ſmall quantities, that the patient's ſtrength may not ſuffer. The ſame precaution is neceſſary with reſpect to purging.

When the diſeaſe is in the rectum, with a teneſmus, he adviſes a moiſt vegetable diet, in order that a lax ſtate of the body may facilitate the expulſion of the fæces. He ſays, he knew ſome people that were abſolutely cured of the Dyſentery by eating copiouſly of plums, by which means the ſtools paſſed with eaſe; and others by eating a large quantity of grapes.

He ſays, warm baths are uſeful in the beginning of the diſeaſe; particularly

larly when drinking cold water, and a cold diet, have preceded the diſeaſe; or when there is a ſuſpicion of phlegm.

But care muſt be taken that the matter which is ſometimes diſcharged in the ſtools, coming from a corroſion in the bowels, is not miſtaken for phlegm and cold humour; which is often done by the ignorant.

In this diſeaſe he purged with ſcammony, and aloes;—his other remedies were like thoſe of his predeceſſors.

In *Cap*. 3. *Lib. VIII. de Imbecilitate Jecoris et Dyſenteria*, he adviſes *Rheum Barbaricum*; which is the firſt inſtance among medical writers of the mentioning of *Rhubarb*: He uſed it as a ſtrengthener, and not as a purgative:—"robur adjicere et confir-"mare."

Avicenna, *Lib. III. Fen* 16. *Tract.* 1 *et* 2. remarks in this diſeaſe, that

 ſometimes

ſometimes the inteſtines are perforated by the ulcers, and that the corruption eſcapes into the abdomen, and death enſues. He ſays, it is aſſerted that ſome who have had a perforation in the inferior inteſtines, have had an abſceſs formed in the belly, which being opened, the ſtools have been diſcharged there, and the patient has lived; but though ſuch a caſe may be poſſible, it is very improbable; and more ſo that the patient ſhould ſurvive it, and continue to void his excrements at the opening *.

A flux is often cauſed by acute diſeaſes, fevers, and tertians; and is often a criſis in theſe caſes. But that Fluxes coming ſuddenly after an acute diſeaſe, portend death.

He ſays, ſleep is of all things the moſt

* *Matt. de Gradibus*, Part II. Pract. 12. ſays, he ſaw a caſe of this ſort, where the patient voided his excrement at the wound, and lived for twenty years afterwards:—ſome other writers have mentioned ſimilar inſtances.

beneficial

beneficial to people with Fluxes, and recommends baths and frictions with warm oils, to open the pores, to bring the humours to the ſurface of the body.

Dry-cupping the belly, he ſays, has often removed Fluxes and excoriations of the bowels, in four hours; and that he has himſelf experienced it.

His remedies are taken from GALEN and the Greek writers, and are chiefly compoſed of galls, earths, gums, aſtringent herbs and fruits, old cheeſe freed from its ſalt and toaſted, album græcum, coagulum of a kid, or hare, ſtomach of an oſtrich dried and powdered, milk, with hot ſtones or irons quenched in it, eggs boiled in vinegar, opium, ſaffron, pepper, green vitriol, ginger, cheſnuts, acorns, gum arabic, whey, with cataplaſms, glyſters of butter and dragon's blood, &c.

He cautions againſt the uſe of narcotics, and ſays, that they ſhould be uſed in cataplaſms rather than in glyſters,

and in glyſters rather than by the mouth. He adviſes rain water in preparing the food: and drinking cold water.

Where there is a flux of blood, without an excoriation, that is obſtinate, he adviſes tight ligatures, and ſtrong frictions, to be applied to the hands; and the patient to be put into cold water, in the Summer time, and into the cold air, in the Winter; and that he ſhould drink cold water, and his drinks, &c. to be cooled in ſnow.

When there are ulcers and excoriations in the inteſtines, the humours are to be carefully evacuated by gentle purgatives. He ſays, *Rhubarb* is a wonderful remedy in Ulcers of the Inteſtines and Fluxes, taken in plantain water, with a little old wine.

FERNELIUS *de Morbis Peſtilentium, Cap.* 13. ſays, that the Dyſentery raged overall Europe in the year 1538, and that ſcarcely any

any town was free from it, without any known or apparent cauſe, from any particular ſtate, or change, in the atmoſphere.

J. Heurnius, in a note, *de Morb. Inteſtin. Lib. VI. Cap.* 10. Fernelii, ſays, that garlick, with ſugar and lemon juice, was found to be a remedy, for people who had returned to Amſterdam from the Eaſt-Indies, afflicted with the Dyſentery, from living on putrid food, in 1597. O. Heurnius mentions the ſame remedy for Dyſenteries in long voyages.

Forrestus, *Lib. XXII. Obſ.* 31. *et ſeq. de Dyſenteria*, ſays, a young man was ſeized with a Dyſentery from eating a great quantity of grapes without bread; and was cured by a glyſter. Another young man, in Paris, in 1545, from drinking freely of impure new wine, was attacked with a vehement diarrhœa, and the next day with a true Dyſentery, and was cured by glyſters, one of which was compoſed of

"eight ounces of cows milk, in which "hot ſtones had been often quenched; "four ounces of plantain juice, two "ounces of oil of roſes, and the yolk of "one egg," given cold.

He purged with rhubarb, in powder and infuſion alone; ſometimes myrobalans and tamarinds were added. He gave toaſted rhubarb often. He cured a man in 1583 of a Dyſentery, by a doſe of toaſted rhubarb, and myrobalans, powdered, taken in a cup of beer. He ſometimes fomented the abdomen. He condemns the ancients, who gave ſalt water, and acrid glyſters, ſuch as had arſenic, lime, ſandarach, &c. in them.

He condemns the giving opiates, without the greateſt neceſſity.

He ſays, Dyſenteries are ſometimes contagious and peſtilential; and that there was one ſo at Delft, in December, 1567; another in the Winter, 1580, in which he gave gold filings, pearls, bezoar, &c.

HOLLERIUS, *de Dyſenteria, Cap.* 43. ſays, the cure conſiſts in bleeding; purging; lenient, detergent, and conſolidating glyſters; potions; and external remedies. He prefers rhubarb before all other purgatives, which is to be frequently repeated. In the beginning he gave only an infuſion of four ſcruples of rhubarb (more or leſs), in ſuccory, or ſome other ſimple water; with, ſometimes, a little ſyrup of dried roſes. In the progreſs of the diſeaſe, he added a ſcruple of the powder of rhubarb to the infuſion; and afterwards he gave toaſted rhubarb, as having an aſtringent quality; alſo a decoction of maſtich (two drams to a pint of water), with ſome wine; or rain-water, in which hot gold had been quenched. The cure was finiſhed with aſtringents, after proper evacuations to carry off the offending matter. He uſed the arſenical, and other acrid glyſters of the ancients; but recommends adding opium to them. He ſays, promoting ſweat, where the patient is ſtrong, with

a bath, or ſteam, compoſed of ſudorific things, is very ſerviceable. He ſays, in the Autumn of 1557, he cured all his patients with lenient glyſters, and rhubarb only; and did not loſe one among the many he attended. He mentions the caſe of a monk, in which black ſtools were voided, and the patient recovered.

Duretus, *de Dyſenteria Annotat. Morb. Int. Hollerii*, diſapproves of toaſting rhubarb. He adviſes a pint of warm oil of roſes, or a pint of warm oil of almonds, with four ounces of the mucilage of quince ſeed, for a glyſter, to alleviate the pains and inflammation: it is to be retained as long as poſſible. He diſapproves of glyſters compoſed of vitriol, auripigmentum, and cauſtic preparations. He ſays, a nobleman had ſome arſenic applied to a tumour on his wriſt, by a ſurgeon, which cauſed his head to be affected, and he died in great miſery in two days.

Ballonius

Ballonius ſays, Dyſenteries are either inteſtinal and meſenterical, or hepatical; and that it is abſurd to attribute all Dyſenteries to the inteſtines. He ſays, the diſeaſe ought to be called *Tormina*, rather than *Difficultas Inteſtinorum*. He adviſes purging, before the uſe of aſtringents, and when there is great heat, and when the ſtools are acrid and ſharp. He adviſes milk in glyſters, and ſays, that oily and anodyne glyſters are often hurtful. When purging is neceſſary, he recommends caſſia and tamarinds.

A Flux, ſuddenly ſtopped by rhubarb, occaſioned a tenſion of the abdomen; it was removed by repeated bleedings. Diuretics and diluting are, in ſome caſes, adviſable, and, in ſome, hurtful; but, he ſays, their uſe has been much diſputed.

Septalius adviſes in the Dyſentery, when purging is neceſſary (as in groſs habits, and when there is a bitter taſte in the mouth, and the ſtomach is diſordered),

dered), rhubarb, myrabolans, tamarinds, manna, ſyrup of roſes, and ſuch mild purges, to evacuate the ſharp humours: he ſays, rhubarb cauſes great pain ſometimes, given alone, in ſubſtance; and that toaſting it moderately, contrary to the opinion of others, increaſes its purgative quality. When the pains are great, anodynes by mouth and in glyſters are recommended; but not too often repeated. Fat and unctuous glyſters are adviſable when the bowels are abraded; and abſtergent glyſters where the ulceration is ſordid and of long ſtanding. He forbids drying glyſters of arſenic, and ſuch things; and where acrid glyſters of pickle of olives, or lixivium of ſope, are given, that another ſhould be given immediately after, compoſed of oil of roſes, or ptiſan, or decoction of bran, with ſyrup of purſlain, and eggs, to alleviate the pain and ſheath the bowels. In order that the glyſters may be retained, he adviſes a flannel wrung out of an aſtringent decoction, to be applied and preſſed to the anus.

Botallus *de Curatione per Sanguinis Missionem*, disregards the opinion of Galen, where he says bleeding should not be performed on people "under the age of fourteen years, and past sixty;" and contends for the utility of bleeding in the Dysentery, Lientery, and Diarrhœa. He gives some examples where the Dysentery was cured by copious and repeated bleeding only; and others, where bleeding, and purges of infusion of senna and syrup of roses, completed the cure. He says, his brother, then sixty-five years of age, had laboured under a palsy, and spasmodic complaint, from the time he was eighteen years old: and that during all that period there had scarcely ever passed a month, in which he had not been blooded once, twice, or even three times; and seldom in a less quantity than six ounces, and often more than a pint.

Botallus was a great patron of blood-letting, and the first who introduced

duced the frequent practice of it among the French, about the year 1580. He used it in pestilential fevers, accompanied with exanthemata, and even after the appearance of swellings: "et aliis ejusmodi "abscessibus præmaturè insurgentibus." We find SYDENHAM quoting his authority in defence of his own, where he recommends copious and repeated bleeding in the plague. BOTALLUS bled in almost every disease, and ingeniously defended his practice. He says, "sæpe spasmum, hy-"dropemque sanguinis evacuatione sum "medicatus." GALEN makes the same observation.

PLATERUS *de Dejectione, Cap.* II. recommends rhubarb as a purge before all others: he says, when rhubarb is toasted, it lessens its purgative quality, and if it is toasted too much, it destroys all its virtues. At first it should be given in powder, from half a dram to four or five scruples; or in infusion: if afterwards, it is required to be more astringent, it may be toasted

toaſted a little. Bleeding is forbidden; and he admits of vomits only when the cauſe of the diſeaſe is in the ſtomach; ſudorifics, and diuretics, if the ſtrength will permit, and if nature inclines to favour the operation of thoſe medicines.

The patient is to avoid acrid, ſaline, and in particular acid things; he is to be cupped on the abdomen; and to have his legs waſhed with a warm decoction of the ruſt of iron, ſteel filings, and ſharp vinegar; and the vapour of it alſo to be applied to the anus. He has added to the farrago of the ancients, human bones, chalybeated water, earth worms, medicated wine with iron or gold ſteeped or boiled in it; aſhes of a burnt hare, a quince, or pear, excavated and filled with wax and roaſted, &c. He ſays, the hæmorrhoides coming on moderately, relieves in this diſeaſe, by derivation.

G. Fabricius Hildanus, *de Dyſenteria*, ſays,

ſays, among the external cauſes of Dyſenteries, a corrupt air is the moſt dangerous. That the Dyſentery which raged at *Berne*, from 1601, to nearly the end of 1603, had this univerſal cauſe; and that there is no cauſe more univerſal, of health and ſickneſs, than good or bad air. That the air had been before this Dyſentery raged, loaded with vapours and exhalations, preceded by two earthquakes.

In 1592, during the dog days, at a meeting of the great ſenate of *Berne*, their wine was put into copper veſſels, and ſuſpended in a cold well, in order to cool it. In a few days after they had drank it, the legates themſelves, and almoſt all the people who accompanied them, were attacked one after another in the ſame manner, with a vehement pain of the belly, Fever and Dyſentery, of which many of them died. One of them, whoſe name was WILLADING, and who eſcaped with great danger, whenever he drank his wine cooled afterwards in hot weather, was always attacked with pain and

ſevere

ſevere gripings, and ſometimes with a Diarrhœa. So ſagacious is nature, ſays HILDANUS, that ſhe always abhors whatever has been injurious to her. He ſays, that he himſelf having been hurt by eating ſome poiſonous muſhrooms in his youth, he could never uſe thoſe that were good afterwards, without nauſea, eructations, and pains at the ſtomach.

He ſays, he had a ſevere Dyſentery himſelf, in May 1605, cauſed by eating with a ſallad, ſome vinegar that had been kept in a veſſel lined with lead.

After the patient has been purged, vomits are ſtrongly recommended, compoſed of *rain water two pints*, *honey three ounces*, boiled and deſpumated, until one-third is conſumed; of this hydromel the patient is to take a cupful warm, with *two ounces of oil of olives*, or of *freſh butter*: and an hour and half afterwards, to provoke a vomiting, by introducing a feather, or the fingers, anointed with oil or butter, into the throat. If a ſtronger vomit is neceſſary,

ceſſary, *Radiſh Root*, beat up with the hydromel and ſtrained, may be given. Half an ounce, or leſs, according to the age of the patient, of *Radiſh Seed* powdered, with the hydromel and oil, or butter, is an excellent vomit. Some give a dram of *Aſarabaca Root* as a vomit.

He adviſes bleeding, in ſmall quantities; or ligatures to the arms and legs; or cupping, to derive and turn the humours from the inteſtines:—alſo covering the patient in bed to cauſe a ſweat, but not in the beginning of the diſeaſe; there diuretics are to be uſed. His purge was rhubarb, mirobalans, and michoacan. He commends nutmeg highly. He ſays fat broths, or butter, or oil of olives, or oil of almonds, is proper to be taken to alleviate the pains: particularly oil of unripe olives, to the quantity of three or four ounces, in ſome freſh meat broth, is to be given. He ſays, *Cap.* 7. that freſh butter mitigates the pains, and defends the inteſtines.

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He mentions a caſe where the patient voided pieces of the ſubſtance of the inteſtines; and alſo ſuch worms as are found in rotten fleſh, which alſo came from him involuntarily: but he recovered. *Cent.* 3. *Obſ.* 47.

He cautions thoſe in health not to go near the places where dyſenterical excrements are, for fear of infection; that the ſick ſhould have places by themſelves, and that ſome quicklime, or aſhes, ſhould be thrown in ſuch places; for thoſe excrements produce a peſtiferous exhalation, which immediately affects the bowels of thoſe in health, by ſome occult quality, which he had often obſerved, and that nobody ought to be ſurpriſed at; as thoſe who look on people with ophthalmias are immediately infected: and the ſheets in which people with the itch have ſlept infect others; and an ulcer in the genital parts, firſt affects thoſe parts by contact; for that particular parts of the body have a certain ſympathy, and affi-

nity, by which means a diſeaſe readily paſſes from one to another.

ZACUTIUS LUSITANUS, *Praxis Hiſtoriarum, Lib. ult. No.* 6. adviſes, to divert the cauſe of the diſeaſe, frictions to the arms with dry cupping, and cupping with ſcarifications to the loins; and diuretics to cauſe a derivation by urine. He gives a form of pills compoſed of toaſted rhubarb and aſtringents, which, he ſays, have ſaved many from the jaws of death. He contends for the uſe of arſenic in glyſters, after RHAZES and AVICENNA, where the diſeaſe is inveterate. *De Dyſenteria, Hiſt.* 86. *Paraphraſis.*

SENNERTUS, *de Dyſenteria, Lib. III. Part* 2. *Sect.* 2. *Cap.* 7. ſays, the Dyſentery may be cauſed by acrid ſecretions; yellow bile; by black bile, which is mortal; by ſharp phlegm; by malignant, and ſuch humours as have a peculiar and ſecret quality, by which they affect and ulcerate

ulcerate the bowels. It may alſo be cauſed by eating Autumnal fruit, particularly if they are unripe: by change of diet, and by food that is ſoon converted into ſharp and corroſive humours; by grapes, muſt, coloquintida, antimony, vinegar, and water kept in lead veſſels, by occult qualities in the atmoſphere, and by that influence of the ſtars, and the conſtitution of the air, which generate in our bodies, or communicate ſome diſpoſition to that end.

That the Dyſentery is contagious; for, in that of the Spring of 1624, which raged ſo violently after a long ſeries of heat, and uncommonly dry weather, one perſon was infected by another, and whole families were cut off by it. That the contagion of this diſeaſe is communicated by the excrement, which, as in all other contagious diſeaſes, being the excretion peculiar to the diſeaſe, is infectious. As in an ophthalmia the diſcharge and effluvia of the diſeaſed eyes will infect people who look at them; and in a conſumption,

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the contagion of the breath from the diseased lungs only, is infectious. But in the Dysentery, where the mass of blood is contaminated, and fevers are united with it, then not only the excrement of the sick communicates the disease, but their breath also, and the exhalations from their bodies. And that the Dysenterical miasma, in whatever mode and manner, taken into the body, whether by the scent of the fæces, or by the lungs, œsophagus, or anus, creates a fermentation in the humours, and excites the bowels accordingly to its own nature; conformably to the peculiar essence of all contagions and poisons.

He mentions the various opinions concerning rhubarb, and says, it is a most useful and excellent medicine in the Dysentery. It should sometimes be given in substance, and sometimes in infusion, or decoction, or in extract: for that rhubarb has two properties; a subtle property, by which it purges; and a gross property, by which it becomes an astringent. In a watery infusion,

ſion, decoction, or extract, its purging quality prevails; but in ſubſtance, it is more aſtringent. Therefore the infuſion, decoction, or extract, ſhould be given in the beginning of the diſeaſe, when purging is intended, and the ſubſtance, when it is intended to act as an aſtringent. When its aſtringency is to be increaſed, toaſting it will anſwer the end, by diminiſhing its purgative quality.

RIVERIUS, *Cent.* 2. *Obſ.* 84. cured his wife of a Dyſentery with opium only; and a purge after the flux had ceaſed, of infuſion of rhubarb and mirobolans, with the addition of ſome of the powder of rhubarb, and ſyrup of roſes. *Cent.* 3. *Obſ.* 4. He gave his ſon ſal prunella in a Dyſentery. *Cent.* 3. *Obſ.* 9. He cured a patient by giving him a dram of ſalt of vitriol diſſolved in water, which vomited him, and made a revulſion of the humours from the inteſtines. *Cent.* 4. *Obſ.* 79. He gave twelve grains of horizontal

gold; it purged gently, and cured the patient; he repeated it twice afterwards, every third day. His general remedy was opium only; with purges of infusion of rhubarb, with some of the powder, and syrup of roses, at intervals.

Bontius, *de Dysenteria, Cap.* 3. *Lib. II.* *and Lib. III Obs.* 4. *Hist. Mat. et Med.* says, the Dysentery causes greater devastation in the Indies, than any other malady whatever; he says, it is partly caused by the hot and moist air; and as a proof of the moisture of the air at Java, and of the error that generally prevails among people, who suppose, from the proximity to the equator, it must be hot and dry, he says, that steel, iron, and brass sooner contract rust and verdigrease, in the driest season, when not a drop of rain falls there, than in the wettest Autumn in Europe. It may also be caused by drinking too great a quantity of arrack; by eating too much fruit, as water-

water-melons, cucumbers, jack fruit, pine apples, bananas, &c. without rice, bread and ſalt; as in France and Spain, people who eat too many grapes, without bread, are immediately ſeized with a Diarrhœa, or Dyſentery.

He aſſerts, that diſeaſes in the Eaſt-Indies may be epidemical and peſtilential; and urges as a poſitive proof of it, that the Dyſentery that raged at *Batavia* in 1628, was contagious, when that town was beſieged by the people of the iſland. He ſays, at that time the dead bodies being thrown into the river, corrupted the waters; and the air was likewiſe tainted by putrefied carcaſſes of men and beaſts, that died of famine and wounds, which lay unburied in the fields. Beſides, the water was vitiated by ſome thouſands of baſkets of ſerpentania root, which the Indians ſteeped in the river, in order to diveſt it of its poiſonous quality, and that a glutinous ſubſtance, which, if we put the water wherein the root has been infuſed, into a glaſs for a few hours, we may ob-

ſerve falls to the bottom, like the white of an egg. They ate the root toaſted inſtead of rice, of which there was a ſcarcity in the camp. This will not appear ſtrange to thoſe who know that in the Weſt-Indies, the root *Caſava* is uſed inſtead of bread, although the expreſſed juice of the root is immediate poiſon. To this noxious diet, may be added the drinking of brackiſh water, as the winds blowing from the ſea at ſtated periods, forced the ſea-water into the river, and made it ſalt. Moreover, the river ſwarmed with worms, that were generated in the bodies of the dead; the ſeaſon being the hotteſt, and moſt rainy in the whole year, from September to February, when the weather is conſtantly wet, and the ſun vertical.

As to the cure, he ſays the common remedy was infuſion of rhubarb in a decoction of tamarinds, to evacuate and attemperate the acrid fluids, as it is ſaid: —But, he ſays, this remedy was not only hurtful, but ſometimes deſtructive, as it cauſed great irritation and pain, when the acrid

acrid bile was extremely abundant; and that the great weakneſs in a Dyſentery rather requires reſtoratives than purging: therefore, what he found by experience to be the moſt ſucceſsful practice, was a common drink made of a decoction of rice, with endive and ſuccory: adding likewiſe the harts-tongue, or phyllitis, which grows plentifully there, about the rivers.

But if the pain ſhould not admit of ſo ſlow a regimen, recourſe muſt be had to the extract of ſaffron, which he affirms to be a medicine equal in efficacy in the Flux, to any that has ever been diſcovered; and that it is a moſt perfect antidote againſt this diſeaſe, even when of a malignant kind.

The fruits of the country are recommended; ſuch as mangoes, which are uſeful from their acidity and aſtringency; alſo ſyrup of the juice of freſh pomegranates; and the flowers of them preſerved, to ſtrengthen the bowels.

PISO,

PISO, *de Dyſenteria, Lib. II. Cap.* 12. *Hiſt. Nat. et Med.* ſays, at the *Brazils* the Dyſentery ariſes from perſpiration being ſtopped by the cold night winds; and from the immoderate uſe of fruit, and unwholeſome drinks, aſſiſted by the heat and moiſture of the air; but that it never appears like an epidemical, nor contagious diſeaſe. As to the cure, he ſays, rhubarb, and the mildeſt laxatives are ſometimes too irritating, and that the beſt medicine to procure evacuations with, is *Ipecacuanha*; of which, and its uſe, he ſpeaks in the following manner:

"Dehinc ad radicem Ipecacuanhæ
"tanquam ad ſacram anchoram confu-
"giendum, qua nullum præſtantius aut
"tutius, cum in hoc, tum in pleriſque
"aliis, cum, vel ſine ſanguine, fluxibus
"compeſcendis, natura excogitavit reme-
"dium. Quippe præterquam quod tuto
"et efficaciter tenaciſſimos quoſque hu-
"mores per ipſam alvum, ſæpiſſime au-
"tem

"tem per vomitum ejiciat, et a parte af-"fecta derivet, vim quoque aſtrictivam "poſt ſe relinquit. Illud vero hoc modo "perficitur: drachmæ duæ radicis Ipeca-"cuanhæ in ℥iv liquoris appropriati "coctæ, vel per noctem maceratæ, cujus "infuſum cum vel ſine oxymellis ℥I ex-"hibetur. Poſtidie ſemel atque iterum "pro renata, ſecunda imo tertia ejus de-"coctio repetenda, tam quod ægri debi-"liores, eam facilius ferant, quam quod "aſtrictioria ejus vis tunc magis efficax "appareat.". *Lib. II. Cap.* 9.

He ſtrongly recommends gruel made of *Tipioca*; and alſo emulſions of it, both by way of drink and glyſters. To take three or four drops of balſam capivi in the yolk of an egg; and the ſame quantity in the white of an egg, to be applied to the anus, externally, on ſome cotton, or to be uſed in a glyſter. Unripe *Bananas*, half roaſted, may be taken as an aſtringent food, or the fruit cut ſmall, and dried in the ſun, and made into a maſs, adding a little vinegar, which

 boiled,

boiled, is to be uſed inſtead of bread. Conſerve, and rob of pomegranates, and other aſtringent, and cooling ſimples of the country; as the *Araça*, *Guajába*, *Mureçi*, *Murucujá*, *Inipápa*, *Acajú*.

F. Deleboe Sylvius, *Praxeos Medicæ Appendix*, *Tract.* 10. *Sect.* 246. *et ſeq.* ſays, in a Dyſentery the inteſtines are corroded, and ulcerated from an acid humour; and therefore thoſe err, *toto cœlo*, who attribute the cauſe of a Dyſentery to bile alone, in whatever manner corrupted, and rendered acrid: for after the lixivial ſalt of the bile is rendered acrid, it excites a gangrene, as well in the bowels as elſewhere, but never an ulcer. It is therefore an ulcer of an acid, not of a lixivial effect. And unleſs an acid, and alſo an acrid humour, are joined to the bile, a Dyſentery is never produced, which is only cauſed by a humour ſtrongly acid, and ſharp, being brought there.

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The Dyſentery of 1669, at *Leyden*, was owing to æruginous bile, corrupted by an acid acrimony.

The principal medicines are toaſted rhubarb, diaſcordium, theriaca, abſorbents, &c.

He ſays, if a teneſmus remains *in ano*, balſam of ſulphur prepared with oil of turpentine, amber or anniſeed, applied to the part by itſelf, or mixed with other things, is an excellent remedy.

Willis, *Pharmac. Rational. Part* 1. *Sect.* 3. *Cap.* 3. ſays, although the word *Dyſentery*, in the common acceptation of it, ſignifies a Bloody Flux of the belly, as a Diarrhœa doth that of the humours; yet he applies that name to the diſeaſe, even where it is not at all bloody. He ſays he has often and long ſince obſerved, that there are two different ſpecies of flux, which almoſt every year appear in London about Autumn, and called, in our

our language, *the griping of the guts*; in one of which the ſtools are watery, and as it were clear, with a ſudden decay of ſtrength; in the other, they are bloody, but the ſtrength remains tolerable. But while theſe fluxes prevail, the ſtools are rarely bilious or mucous.

He ſays, about the Autumnal equinox of the year 1670, which had been preceded by an exceeding hot and dry Summer, many people were ſeized with a very ſevere and dangerous *Dyſenteria incruenta.* The diſeaſe came on ſuddenly, and oftentimes, without any manifeſt cauſe, and reduced the patients by violent vomitings, frequent ſtools, and thoſe watery ones, in a little time to great weakneſs, horrid faintings, and a proſtration of their ſtrength. Many that were well on the preceding day, were within twelve hours ſo reduced, by the tyranny of the diſeaſe, that they ſeemed ready to expire, with their pulſe weak and ſlender, cold ſweat, and ſhort and laborious reſpiration: and many who had not proper remedies and aſſiſtance, died ſuddenly of it. This

diſeaſe

diſeaſe raged for a month, began to decreaſe about the middle of October, and before the firſt day of November it almoſt intirely diſappeared.

In the cure of this Dyſentery, he ſays, no evacuation did good: nay bleeding, purging, or vomiting, always did hurt. Only cordials, and thoſe of the hotteſt nature, and ſuch as abounded with ſpirit, and ſulphur, or a volatile ſalt, proved uſeful: inſomuch, that brandy burnt a little with ſugar, was a popular, and as it were an epidemical remedy; though in the Bloody Dyſentery, being indiſcriminately uſed, it was often found to be dangerous. Hot waters and ſpirits, treacle and mithridate, were the only kind of cordials found to be uſeful.

He ſays, this Dyſentery was not contagious, and though it raged ſo ſeverely in London, it did not extend more than three miles diſtance from that city.

He ſays, the Autumn of 1670 was ſucceeded by the coldeſt Winter and hotteſt Summer ever known, and that in the fol-

following Autumn, 1671, there raged an epidemical fever, of the intermittent type, almoſt all over England. At the ſame time there was a ſevere Bloody Flux, *Dyſenteria cruenta*, that raged in London, by which many were carried off ſuddenly.

From the firſt attack of the diſeaſe, the patients generally had a pain of the belly, and gripings; voided abundance of blood, and often; with continual watchings, fever, and intolerable thirſt; yet the ſtrength was not much impaired; and though the patient had ſometimes almoſt twenty ſtools a day for a week, he was able to riſe from his bed. Some voided caruncles, and pieces of the villous tunic of the inteſtines.

The bloody ſtools appeared terrible; yet the diſeaſe continued for weeks, and ſometimes blood was voided in great quantities every day for months; and at laſt, when the diſeaſe was in its worſt ſtate, the ſymptoms that preceded death, were watchfulneſs, roughneſs of the tongue and

and mouth, with thirſt; and ſometimes mortal *Apthæ* appeared. Where the flux had been ſuddenly ſtopped, theſe ſymptoms ſooner appeared, and they denoted great danger.

Though this diſeaſe was epidemic, it was not equally malignant with all; in ſome it was milder, in others it appeared more violent.

The method of cure, WILLIS ſays, is firſt to ſtop the flux gradually, or to moderate it. But that the indications are not to be proceeded on ſeverally, and ſucceſſively, but to be taken all together, and ſet upon at once. Therefore the remedies ſhould conſiſt of alexipharmics, ſtyptics, diaphoretics, and opiates. His chief medicines were Venice treacle, frequent doſes of laudanum, purges of infuſion of rhubarb and mirobalans, &c.

He ſays, the Dyſentery that commonly appears in London, is not uſually malig-

nant; and although the ſtools are violent and bloody, and the diſeaſe generally of long duration, yet it is not very contagious, nor often mortal. Sometimes indeed it is virulent, and, as it were peſtilential, and deſtroys many, and ſpreads its miaſma widely, by contagion.

SYDENHAM, *de Dyſenteria partis anni*, 1669, *atque integrum*, 1670, 71, *et* 72, ſays, the Dyſentery generally comes as the preſent one did, in the beginning of Autumn, and goes off for a time upon the approach of Winter; but when a ſeries of years are too much diſpoſed to produce it epidemically, it may ſeize a few at any other time, and many at the beginning of the Spring, or perhaps earlier, if warm weather immediately ſucceeds a ſevere froſt, terminated by a ſudden thaw.

In deſcribing the diſeaſe, he mentions *Apthæ* in the mouth as a mortal ſymptom. He ſays, when the diſeaſe proves laſting, the inteſtines at length ſeem to be

affected

affected ſucceſſively downwards, till it be driven to the rectum, and ends in a *Teneſmus.*

After having attentively conſidered the various ſymptoms attending a Dyſentery, he ſays, he diſcovered it to be "*a fever* "*of its own kind, turned inwards upon the in-* "*teſtines*;" by which means the hot and ſharp humours in the blood, are there depoſited by the meſeraic arteries, and the mouths of thoſe veſſels are forced open by the impulſe of the blood, and the flux of the humours.

He ſays, the curative indications are, to make an immediate revulſion of the ſharp humours by bleeding; and afterwards to cool the remainder, and evacuate them by purgatives. He ſays, it is poſſible that there may be as many ſorts of Dyſentery, as there are kinds of ſmall pox; and confeſſes he does not know what ſimilitude there was between the Dyſentery he treats of, and the Endemical Dyſentery of Ireland.

He began by bleeding, and gave an opiate the ſame evening, and the next morning his uſual purging potion.

R. Tamarinds, half an ounce; the leaves of Sena, two drams; Rhubarb, one dram and a half: boil them together in a ſufficient quantity of water to leave three ounces of ſtrained liquor, in which diſſolve Manna an ounce, and add ſyrup of Roſes an ounce, mix them together for a purging potion.

He gave an opiate early in the afternoon on the day of the purge. He repeated the purge twice, or more, every other day, with the opiate. He repeated the opiate night and morning, on the intermediate days: the opiate he uſed was ſixteen or eighteen drops of his own *Liquid Laudanum**, in ſome cordial water.

* *Laudanum Liquidum* SYDENHAMI. ℞ Vini Hiſpanici ℔i Opij ℥i Croci ℥i Pulv. Cinnamomi et Caryophillorum āā ʒi infundantur ſimul in B. M. per duos vel tres dies, donec liquor debitam conſiſtentiam adquirat.—Colatum ſervetur pro uſu.

After

After bleeding, and the firſt purge, he gave ſome mild cordial between whiles throughout the diſeaſe; but chiefly in aged and phlegmatic perſons. The common drink was, *Milk boiled with thrice its quantity of Water*; or the *White Decoction* made of *burnt Hartſhorn, and the crumb of Bread, of each two ounces*; *boiled in three pints of Water to two*, and afterwards *ſweetened with a ſufficient quantity of fine Sugar*; and ſometimes poſſet drink; or, when the loſs of ſpirits required it, he gave for common drink, cold, a liquor made by boiling *half a pint of Canary and a quart of ſpring Water together.* The diet was ſometimes panada, and ſometimes broth made of lean mutton. Aged people he kept more in bed, and allowed them a freer uſe of any cordial water they had been uſed to, than was proper for children or young people.

This method exceeded all thoſe he had hitherto experienced in conquering the diſeaſe, which generally yielded to the third purge.

But if it proved ſo obſtinate as not to give way to this treatment, he gave the former opiate every morning and evening, until it went quite off; or increaſed the doſe to twenty-five drops every eight hours, if the former doſe proved too weak to ſtop the flux. He alſo ordered a glyſter made of *half a pint of Milk, and an ounce and a half of Venice Treacle*, to be injected every day; he ſays, this glyſter is an admirable remedy in all kinds of looſeneſſes.

When the flux only amounted to a ſimple looſeneſs, he omitted bleeding, and gave a doſe of *Rhubarb* every morning made into a bolus with *Diaſcordium*, and two drops of *Oil of Cinnamon*, giving an opiate in the evening.

In the firſt ſeaſon of the Dyſentery, when the diſeaſe was more ſubtile and ſpirituous, if the patient was young and feveriſh, he, in the beginning, directed bleeding; and an hour or two after, a large quantity of cold *Whey* to be taken

by

by way of diluting; and glyſters of the ſame, but warm, without the addition of ſugar, or any other ingredient. He always found the gripes and bloody ſtools go off, upon the diſcharge of the fourth glyſter. This buſineſs being over, and all the whey evacuated, which only takes up two or three hours, the patient was immediately put to bed, when he ſoon fell into a ſpontaneous ſweat, which was ordered to be continued for twenty-four hours, but not at all provoked by medicine; allowing him nothing but warm milk, during this time, which he likewiſe uſed only for three or four days after he left his bed. If a relapſe happened, either from riſing too ſoon, or leaving off the milk diet too ſoon, the ſame proceſs was repeated.

This mode, he obſerves, did not anſwer after the Autumn of the year 1669, nor even in the cold weather of the ſame year; and in the following years it did no good at all.

He ſays, that Dr. BUTLER uſed this diluting proceſs with the utmoſt ſucceſs at *Morocco* and *Tangiers*; and ſuggeſts, that it is reaſonable this method ſhould be attended with greater ſucceſs in hot climates than in England.

When the diſeaſe degenerates into a Teneſmus, he ſays, it muſt be borne until the ſtrength can be recovered by a reſtorative diet, and the free uſe of ſome grateful cordial liquor: Then the Teneſmus will go off ſpontaneouſly, in the ſame degree as the ſtrength returns.

He ſays, he cured a perſon of a chronical Dyſentery by repeated bleedings only; and obſerved, that her blood was like that of pleuritic perſons.

He ſays, alſo, that laudanum alone will cure ſlight Dyſenteries, without any evacuations at all, at a time when the conſtitution has leſs tendency to the diſ-

eaſe,

eaſe, than it had in thoſe years when it raged ſo epidemically.

BARBETTE, *Cap.* 5. *de Dyſenteria*, ſays, the diſeaſe is cauſed by too great an acrimony of the bile, and too much acidity of the pancreatic juice. Among the curative indications, he ſays, the Dyſentery, "*qua Dyſenteria*," never indicates bleeding. The peccant humour is to be corrected, and evacuated, and the parts ſtrengthened. In the cure, three things only are neceſſary;—Purges, Alterants, and Topical Applications. Every thing in the Dyſentery is to be adminiſtered in ſmall quantities, whether drink, food, or medicine. Rhubarb is his principal purge:—with which, and opium and aſtringents, and anodyne, aſtringent, turpentine glyſters, and applications to the abdomen, he cured his patients.

He ſays, the widow *Van Aſperen's* ſon, who was accuſtomed to drink ſpirituous liquors

liquors, was ſeized with a Dyſentery, with violent pain; and often voided to the quantity of two pounds of concreted blood, of a bright arterial colour. On opening his body after death, the ſmall inteſtines were here and there ſphacelated, their tunics eroded, and they were perforated in four places.

Etmullerus, *de Content. in Inteſt. Expulſ. Læſa. Cap.* 9. ſays, a benign Dyſentery is generally without fever and contagion: and that the cauſes of it are too great a corroſive quality of the pancreatic juice, by itſelf, or when it is not ſufficiently tempered by the bile; autumnal fruits; grapes; muſt, &c.

A malignant Dyſentery is generally united with fever, and ſometimes a peſtilential one, and rages epidemically through a whole region, and ſpreads itſelf by contagion.

He

He ſuppoſes it not only contagious from uſing the ſame place where Dyſenteric people have been, but that uſing the ſame pipe in giving glyſters, that has been before uſed by dyſenteric people, will convey the infection; and refers to the opinion of *Helideus Paduanus*.

He ſays, the Sudorific Tincture of Bezoar was uſed with great ſucceſs in this diſeaſe; and that one who had a malignant Dyſentery took ſeveral times twenty drops, and upwards, of the balſam of ſulphur, and cured himſelf by repeated ſweating.

He commends the virtues of human ſkull bone, as a ſpecific in this diſeaſe; and ſays our great BOYLE informed him, that a dram of the raſpings of it, in a powder, was to be given. He ſays, alſo, that the *Uſnea*, or moſs of the human ſkull, given in doſes from ſix to twelve grains, is ſaid to have wonderful effects: particularly if it be from the ſkull of one who has been hanged, or broken on the

 wheel,

wheel, or any other way received a ſudden death. He ſays, the *Sugar of Lead*, to ten grains, is a ſingular remedy, and ought to be much recommended: and that the *Tinctura Antipthiſica* is an elegant medicine for all internal ulcerations whatever.

His general medicines were aſtringents and opiates; and, he ſays, purging medicines and glyſters are rarely to be uſed.

Hoffman ſays, the intentions of cure are, firſt, that the peccant, acrid, and cauſtic matter, of whatſoever kind, be corrected and carried through its proper emunctories. Secondly, that the violent gripes and ſevere ſpaſms of the inteſtines be ſoothed and alleviated; and thirdly, that the inteſtines themſelves, whether ulcerated or weakened, ſhould be relieved by proper and well-choſen remedies.

He recommends mild cathartics compoſed of whey, tamarinds, and rhubarb: but condemns the uſe of neutral ſalts; and

and ſuch ſweet purges, as prunes, ſena, manna, laxative ſyrups; and all acrid purges, as jalap, ſcammony, colloquintida; and wonders at BOYLE's recommending *Mercurius dulcis* in a Dyſentery. He ſays, he was told by a phyſician who attended a camp, in curing a Dyſentery which raged there, upon the firſt ſuſpicion of contagion, and even when ſigns appeared pretty evidently, that an alexipharmic, prepared of calcined and philoſophically prepared hartſhorn, of diaphoretic antimony, of the volatile ſalt of hartſhorn, and ſaffron, of each ten grains, exhibited with a warm vehicle, produced excellent effects, by diſpoſing the body to ſweat: and after a repetition of four doſes, it checked the violence of the diſtemper.

But ſhould a great quantity of ſordes be lodged in the primæ viæ, he ſays, that a remedy of this kind may be much more ſafely uſed after the previous exhibition of a proper evacuant. It is a very common and fatal miſtake of phyſicians, when,

when, in order to cure a violent Dyſentery, they make an immediate uſe of alexipharmic and theriacal remedies, ſuch as diaſcordium, theriaca andromachi, mithridate, pulvis pannonica ruber, alexipharmic eſſences, and bezoardic tinctures; for he had frequently obſerved that the ſymptoms of an Epidemical Dyſentery had been exaſperated by too large an exhibition of ſuch hot and dry remedies; and that fevers, thirſt and great heat within, have been occaſioned by the uſe of them.

Baglivi, *Prax. Med. Lib. I. Cap.* 9. ſays, moſt of thoſe who die of a Dyſentery are killed by a ſphacelus of the inteſtines, which appears at leaſt three days before their death; for then the extreme parts begin to grow cold, the pulſe low and unequal, the pain and thirſt not ſo violent; and ſome are delirious a few hours before they die.

If

If a dyſenteric perſon be taken with a vomiting, it is a dangerous caſe. The hiccup is a mortal ſymptom, and ſo is the jaundice. A difficulty of ſwallowing is the forerunner of death.

In a mortal Dyſentery, the ſtomach is affected as well as the inteſtines.

If a dyſenteric perſon is ſeized with an inflammation of the tongue and a difficulty of ſwallowing, there are no hopes left.

In the Hæmorrhoides, the blood comes before the excrements—in the Dyſentery with, or after them.

If a dyſenteric perſon takes opiates, and the day after appears of another colour in his eyes, he will ſcarcely recover; but if the colour of his eyes continues unaltered, it is a ſign he may recover: VALSCHMID.

Chewing of cinnamon, and ſwallowing the ſpittle has cured ſome people.

In

In the cure of the Dyſentery, the medicines ought to be few and ſimple; it is often cured with nothing elſe but *Whey* given inwardly, and in glyſters. Several authors take this to be an *arcanum.* Sometimes the diſeaſe is inflamed by too many glyſters, injuring the ulcerated fibres of the inteſtines; therefore they ought to be given but ſeldom, and in a ſmall quantity.

Sweating coming upon a looſeneſs, ſtops it.

He ſays, the root of Ipecacuanha is a ſpecific, and a remedy almoſt infallible in dyſenteric fluxes, and other hæmorrhages, colliquations of the humours, &c. Of this, he ſays, he was informed by Dr. *Sherrard* in England, and had the ſame confirmed by Doctor *Mangetus* of Switzerland.

Degner, in his *Hiſtoria Medica de Dyſenteria Bilioſo-contagioſa,* which raged at *Nimeguen*

Nimeguen in the autumn of 1736, ſays, the *Dyſentery* made its appearance in July, but was preceded by a bilious *Diarrhœa*, accompanied with vomitings and ſlight pains in the belly, which began in the month of April, and continued increaſing until the ſetting in of the bloody flux. The Dyſentery increaſed in violence, until the middle of September, when it was at its ἀκμὴ, and had by that time ſpread itſelf unto the neighbouring villages, though confined until the end of Auguſt, within the walls of the town. He ſays, the firſt perſon attacked was an officer of horſe, a young robuſt man; to whom he was called on the ſeventeenth of July, and who died on the twenty-fifth. He ſays, the calamity began from this young man, and ſpread itſelf from the houſe in *Paul's-Street*, where he was, to others in the ſame ſtreet; and from thence over the whole town.

It began to decline towards the end of October, and towards the end of

December entirely diſappeared in the town.

It is to be remarked, that the French people in the town were almoſt intirely free from its attack: two only, and thoſe old men, were ſeized with it: and the Jews intirely eſcaped. He ſays, this confirms the opinion, that one nation may be more obnoxious to contagious diſeaſes than another.

In the cure, he began with a vomit of Ipecacuanha powder, and repeated it, if neceſſary, to the ſecond or third time. After the vomit of Ipecacuanha, he purged with the watery Tincture of Rhubarb, or *Rolfinck's* Tincture, made in the following manner:—take of *Rhubarb half an ounce, of Salt of Tartar one dram, Succory Water, or any diſtilled water, ſuch as Mint Water, five or ſix ounces.* Of this he gave half, or a whole ſpoonful, every four or ſix hours, to adults *.

On

* "Sed ego plura addo, atque affirmo Rheo ineſſe "omnino aliquam virtutem ſpecificam, non quidem, ut "alii

On this medicine, which he calls a *Divine Remedy**, from the beginning he chiefly depended, which he repeated and continued while evacuations were neceſſary. Afterwards he gave an ounce or two of a decoction of *Simaruba*, two drams in half a pint, every three or four hours, according to circumſtances, until the patient was cured. The effects of this medicine, he ſays, were more remarkable when the diſcharges were bloody, than when they were bilious. Sometimes he added a little ſyrup of white, or red poppies, to it. When more roborant and aſtringent medicines were required, he gave *Caſcarilla Bark*, and *Terra Japonica*. To aſſuage the pains and lubricate the bowels he gave *Salab*, and preferred it to any other mucilaginous or gummous medicine.

"alii volunt, in genere, in ſanandis omnibus Dyſenteriis, et Diarrhœis, cum vel ſine ſanguine, ſed ſpeciatim in Diarrhœis et Dyſenteriis aliiſque adfectibus biliofis, in quibus ſuas vires efficaciter exſerit." Cap. 3. Sect. 32.

* "Divinum potius quam humanum remedium." Cap. 5. Sect, 15.

 He

He condemned bleeding in this Dysentery, and early opiates, astringents, and neutral salts, such as *Tart. Vitriolat, Arcan. Duplic, Sal Polychrest, Sal Prunellæ, &c.* and all mineral and metallic preparations, drastic purges, and sudorifics. Concerning the latter he pronounces the following sentence: "*Sudorifera caute adhibenda sunt; sudor enim arte prolectus minime eundem effectum salutarem habet, ac sponetaneus, quo natura materiam humoribus insinuatam aptè e corpore eliminare novit. Ars vero turbulenter sæpius cocta et cruda simul et semel ad externa pellit, majoresque in corpore turbas excitat, quid quod, ob inquietudinem ægrorum et sedium numerum, vix debita in lecto continentia, ad tales sudores artificiales observari, nec materia peccans per sudorem satis eliminari possit.*" Cap. 5. Sect. 23.

CLEGHORN, in the Dysentery at *Minorca*, used *Ipecacuanha* and *Vitrum Antimonii Ceratum*, as evacuants. He says, of the latter he used to give from five to ten grains, early in the morning; of the former, he directed ten, or fifteen grains,

grains, in powder, to be divided into three doſes, and to be taken in the fore-noon, at the interval of two hours, or an hour and half between each doſe. The moſt common effect of both, was to procure a thorough evacuation upwards and downwards, during the day; and they often threw the patient into a ſweat the enſuing night.

But he ſays, he preferred the Ipecacuanha, as being certain in its operation: whereas the other, ſometimes, did not produce the intended diſcharge; at other times occaſioned greater commotion than was expected. Nevertheleſs, he ſays, he muſt acknowledge, now and then, in deſperate Bloody Fluxes, he had known the antimonial medicine to be ſucceſsful, after every thing elſe had been tried to no purpoſe.

At firſt he repeated the above-mentioned evacuations every other day, for three, or four times; and afterwards at longer intervals, with proper drinks, and a ſmall opiate at night.

But when the Dyſentery begun with horrors, rigors, fever, pain, &c. he confided principally in the antiphlogiſtic method, with bleeding plentifully, emollient glyſters, and fomentations, and diluting drinks; avoiding opium as much as the intolerable torture of the diſtemper would permit.

When the fever was aſſuaged, he endeavoured to procure a ſufficient diſcharge by ſtool, with mild purgatives, ſuch as whey, weak broth, ſweet oil, ſolution of manna, cream of tartar, &c. proceeding, by degrees, to the moſt active, till the end propoſed was obtained.

When other means failed, he gave ſix or ſeven grains of calomel, with a grain of opium at night, after the uſe of the ſemicupium, and a purging apozem made of ſenna, manna, and ſal catharticus, the next day.

In Chronical Dyſenteries he gave an opiate, twice a day, while the diſeaſe continued.

HUXHAM,

Huxham, *de Aere, et Morbis Epidemicis*, ſays, of the Dyſentery in April, 1743, that round worms were generally voided in the ſtools, even by adults and old people; that worms had been a more common complaint among the people for many months before, than he ever remembered. He ſuppoſes this might have ariſen in conſequence of the great quantity of fruit with which the preceding Summer and Autumn abounded.

The diſeaſe was violent, and continued from the beginning of April to the end of May; particularly in the town and neighbourhood of *Plimpton*. He ſuppoſes it might have been an epidemic fever, tranſlated to the inteſtines, as an Epidemic Dyſentery is not commonly a diſeaſe of the Spring.

He often found good effects from *Calomel*, when the patient had worms: but generally began the cure with bleeding, and a vomit of Ipecacuanha. He ſays, the

the inteſtines are generally inflamed, in ſome degree or other, in this diſeaſe.

He ſays, Rhubarb, (toaſted if Eaſt-Indian) is the beſt purgative in the Dyſentery, given often, with a little nutmeg, or cinnamon. He ſays, there is no diſorder in which ſweetening, diluting drinks, are more neceſſary than in the Dyſentery; that water alone has often done great ſervice; but that in the beginning of the diſeaſe it ſhould be given warm; and that, after the bowels had been cleanſed, he has frequently cured the diſeaſe with water, and a ſmall quantity of opium.

HILLARY, *on the Diſeaſes of Barbadoes*, ſays, the Dyſentery may be truly ſaid to be Endemial in hot climates, and that it appears in *Barbadoes*, more or leſs, every year. He ſuppoſes it to be infectious. In the cure he began with bleeding, then gave a vomit of Ipecacuanha, and after its operation an anodyne, with toaſted rhubarb. Bleeding is to be repeated, if neceſſary:—then ſmall doſes of Ipecacu-

anha

anha with Theriaca, twice a day, and an anodyne after it has vomited the patient, once or twice, for three or four days.

But if the fever and inflammation are abated, or taken off, and yet bloody, or brine-like ſtools continue and are frequent, giving a doſe or two, and ſometimes a third doſe, of *Stibium Ceratum*, at proper diſtances after each other, and a ſuitable opiate a little time after the laſt, has been of great ſervice. But he obſerves, "that this medicine, how much "it may be recommended and extolled "by ſome perſons, though it may be a "good medicine when properly timed, "yet as it is frequently and promiſcuouſly "given, at all times of this diſeaſe, and "in all circumſtances, by ſome perſons, "it cannot ſucceed: for if the fever and "inflammation are not firſt taken off, or "conſiderably abated, it ſeldom, or never, "anſwers their expectation. But theſe "being taken off, or greatly abated, it "ſometimes proves to be a good medi"cine; though I think I have ſeen the

"Ipecacuanha,

"Ipecacuanha, in ſmall doſes, anſwer "much better."

For the pain and ſoreneſs of the inteſtines, following the practice of TOWNE, he recommends balſam of Locatellus, anodynes and balſamics; and glyſters made of fat broth, milk, balſam of Locatellus, wax, ſpermaceti, elect. e' ſcord, theriac. androm, tinct. thebaic.—When a *Teneſmus* is kept up by indurated fæces, he adviſes purges to be given of manna and rhubarb, with a little ſal polychreſt and oil; and, if neceſſary, glyſters of warm water, honey, oil, and a ſmall quantity of ſoap.

TISSOT, in his *Avis au Peuple ſur ſa Santé*, ſays the Dyſentery is commonly epidemic, beginning ſometimes at the end of July, but oftener in Auguſt, and ceaſes when the froſt ſets in.

He ſays, the great remedy is an emetic; ſometimes a vomit of Emetic Tartar cures the diſeaſe, and always ſhortens it. A vomit of Ipecacuanha is not leſs efficacious,

cious, and has been eſteemed for a great while as a certain ſpecific: but it is not that, though it is very uſeful. This remedy may be taken in the manner in which the Braſilians uſe it*. They infuſe two drams of Ipecacuanha in four ounces of hot water for a night, ſtrain the liquor, and take it in the morning faſting: they repeat for two days afterwards the ſame infuſion, made from the ſame root, of which the firſt was made. The vomiting is moderate the firſt day; it is very gentle the ſecond, and more ſo on the third. The drink to be a ptiſan, made of a quart of barley-water, with two drams of cream of tartar diſſolved in it. The day after the vomit, the patient is to take a dram of rhubarb in two doſes; and the following day nothing but the ptiſan. On the fourth day, the rhubarb is to be repeated. This method generally ſubdues the force of the diſeaſe, but the patient muſt be kept for ſome time to a careful regimen.

* Vide page 283.

Some-

Sometimes the Dyſentery begins with an inflammatory fever, the pulſe hard, full, and violent pain in the head and loins, and the belly tenſe. In this caſe the patient ſhould be blooded, and every day have three or four glyſters made of barley-water, and mallow flowers, or milk and water; and to drink plentifully of the ptiſan.

Vomits are not always neceſſary, and if the inflammatory ſymptoms have been conſiderable, the patient ſhould be purged with manna and Sedlitz ſalts, and not to uſe rhubarb but towards the end of the diſeaſe. He ſays, he cured many patients with only a cup of warm water, every quarter of an hour.

When the Dyſentery is united with a putrid fever, after the vomit, the patient ſhould be purged with manna, tamarinds, and a ſmall quantity of nitre; or with tamarinds and Sedlitz ſalts, and dram doſes of cream of tartar, before the rhubarb is given. Tamarind drink is alſo recommended,

mended, with dram doſes of cream of tartar. When a relapſe happens after ſeveral days, it is remedied by careful regimen, and a dram doſe of rhubarb.

When the Dyſentery is united with an intermittent fever, the Dyſentery is to be firſt cured; then the fever. But if the fever is violent, bark muſt be given at the ſame time.

He ſays, the prejudice againſt fruits in the Dyſentery is erroneous, and pernicious: for though bad and unripe fruits may cauſe cholicks, diarrhœas, conſtipations of the bowels, nervous complaints, and diſeaſes of the ſkin, they never are the cauſe of an Epidemic Dyſentery. But that ripe fruits of every ſort, particularly Summer fruits, are a preſervative againſt this diſeaſe.

He ſays, he knew nine people out of eleven in a family, cured by eating of fruit; but that the grandmother, and a favourite child, who did not eat fruit, but took burnt wine, oil, and ſpices, died:—

That

That in the neighbourhood of *Berne*, in 1750, when the Dyſentery raged very much, ten out of eleven people in one houſe eſcaped it by eating a great quantity of plums. The coachman would not eat any, and was attacked in a very terrible manner:—

That a Swiſs regiment of ſoldiers in a garriſon in the South of France, had the Dyſentery among them; the officers purchaſed the produce of ſeveral acres of a vineyard, and gave the ſoldiers the grapes, which cured all thoſe that were ill, and prevented any of the others from being attacked:—

That a miniſter who ate three pounds of red currants in a morning, was cured of a Dyſentery in two days.

If the corruption of humours, which creates malignant fevers, is united with the cauſes which produce a Dyſentery, the Dyſentery reſulting therefrom will be malignant; in which Ipecacuanha is the

the principal remedy; firſt, as a vomit, and after a purge of rhubarb, in ſmall doſes, with chicken or veal broth, and a little Rheniſh, or Vin de Grave: and it is of the greateſt importance to give it in the beginning, before all the inteſtinal humours are infected.

If there be a diſeaſe truly contagious, it is this, ſays TISSOT. I have ſeen, ſays he, within theſe few months, near the town, a terrible example of its infection. A young man arrived, in a bad habit of body, from Holland, where he had been a ſoldier; and after a few weeks was attacked with a ſevere Dyſentery, truly malignant, which, in a few hours, deſtroyed all his ſtrength. He refuſed any aſſiſtance: and during five days that the diſeaſe laſted, he went to ſtool in the barn, the kitchen, the garden, the rooms, and lay all night on the graſs, covered with the dew; by which conduct he infected the ſix other perſons that compoſed the family: four of them were ſlightly attacked: but a man of ſixty years

years of age, and a boy of ten, periſhed. The boy took nothing, and died within ſixty hours: the father took ſome medicines in the beginning, and died in fourteen days. There was no Dyſentery reigning in the neighbourhood at this period; the water uſed in the houſe was good; and upon the moſt attentive examination, he ſays, he could find no other cauſe for this infection, than the diſeaſe of the firſt perſon who was attacked.

AKENSIDE (*de Dyſenteria Commentarius*) ſays, the Dyſentery ought rarely to be claſſed among acute diſeaſes, or to be accompanied with any fever *. A doctrine, he ſays, different from that which the chief modern phyſicians have laid down. That ulcers are the effect, and not the cauſe of a diſeaſe. That the Dyſentery is *a Rheumatiſm of the Inteſtines*; and like the rheumatiſm, or other articular diſeaſes, ſometimes contains

* "—— eam perraro in morbis acutis reponi debere, "aut febre ulla comitatam eſſe." P. 4.

tains a kind of fever within itſelf, or at leaſt is attended with one; but that it is frequently unattended with any fever, and much more ſo than the rheumatiſm. That the Dyſentery in London, in 1760, 1761, and 1762, continued through the Winter no leſs troubleſome than in Autumn; a circumſtance, which in his opinion, ſhews its cloſe connection with the rheumatiſm. That the diſeaſe ſeizes on the ſmaller inteſtines; then gradually deſcends to the rectum, according to the opinion of SYDENHAM. That it ſometimes ceaſes during menſtrual purgation, and returns when that period is over. That the imprudent uſe of opiates have, by ſtopping a flux, brought on a dropſy. That it frequently happens, when people are freed from a Dyſentery, they are ſeized with a pain in the ſhoulder, or in the ſide; ſometimes in the breaſt, arms, legs, or the integuments of the cranium. This pain is preceded by no rigor, nor ſigns of fever, for the diſeaſe is, plainly, reduced to a Chronical

Rheumatiſm. That the Dyſentery and Rheumatiſm made frequent tranſitions from one to the other.

He contends that the matter and cauſe of both the Dyſentery and Rheumatiſm, are the ſame.

In the cure, he adviſes bleeding once where there is great heat, ſhivering, and quick pulſe; and though there ſhould be no fever, if the patient be of a plethoric and full habit of body: for this prevents any fever, and the Rheumatiſm, which is ſo frequently ſubſequent to the Dyſentery. It is alſo to be performed if the ſpaſms and gripings are ſevere; and in ſhort, it ought to be the firſt ſtep, unleſs ſome manifeſt ſymptoms diſſuade therefrom; ſuch as a lax habit of body, inclining to a dropſy, great debility, horror, cold ſweat, intermittent pulſe, and very fœtid ſtools.

After bleeding, which is not to be repeated, a vomit of Ipecacuanha is to be given,

given, unleſs the patient is too weak; and an hour or two after its operation is ended, he adviſes, as the only medicine neceſſary to the cure, "one grain of "Ipecacuanha, in a draught compoſed of "half an ounce of Simple Mint Water, "and two drams of Spirituous Mint "Water mixed together; or two ounces "of Simple Alexiterial Water, and half "a dram of the Cordial Confection," every ſix hours. This was his practice in 1758. In 1759, he gave "two grains "of the Ipecacuanha," but he found this doſe created too great a ſickneſs, and ſometimes vomiting, and then he return-ed to the "one grain doſes," ſo as to cre-ate a nauſea of the ſtomach. In this manner, for four years, he ſays, he con-tinued to give his patients ſmall doſes of Ipecacuanha, and found by experience, that in all kinds of Dyſenteries, whether acute or chronical; whether the ſtools were ſtreaked with blood, or conſiſted only of mucus; in every age, ſex and con-ſtitution, and in all ſeaſons, that the me-dicine produced its ſalutary effect.

 He

He ſuppoſes the Ipecacuanha in ſmall doſes does not operate by ſweat, but, by rendering the belly ſoluble, it expels the humours that give riſe to the diſeaſe; and by its antiſpaſmodic quality, relaxes the coats of the inteſtines, and ſo eaſes the gripings.

If after the patient is relieved from the dyſentery, he is attacked with the rheumatiſm in the ſhoulders, ſides, integuments of the head, arms, or legs, antiſpaſmodic remedies, and ſuch as increaſe perſpiration, are to be uſed; ſuch as caſtor, muſk, and valerian; or, "the powder "of Ipecacuanha and Thebaic Extract, "of each two grains; Nitre and Vitri-"olized Tartar, of each eight grains:" This powder to be taken, and to drink plentifully of the decoction of barley, guaiacum, or liquorice; and to be repeated in ſix or ſeven hours, if it does not produce a ſweat; covering the patient well with bed clothes, and continuing the operation for ten or twelve hours. If the patient refuſes this method, or be too

weak for it, blisters are to be applied to the part wherever the pain attacks.

Brocklesby, in his *Medical Observations on Military Diseases, from* 1758 *to* 1763, says, "out of eight hundred men and women who were ill of a Bilious Fever and Flux, upon the return of his Majesty's troops to the Isle of Wight, after an expedition and descents upon the coasts of France, in the year 1758," he had a sufficient number of instances, as well as in subsequent campaigns, to prove "some inconveniencies from the astringent powers of rhubarb, and by too early checking the bilious evacuations. For many, who were treated in the usual way, with rhubarb, joined with an opiate, immediately suffered delirious ramblings, or an increase of them, if they had any tendency to them before: they complained also of a tightness across the chest, which called for immediate bleeding, though some-

" times the patient's ſtrength was already " low, and much worn out."

For which reaſons he uſed as a purge, a mixture made by "*boiling two ounces of ſour Tamarinds in three pints of Barley-water to a quart: adding two ounces of Manna, and an ounce and half of Tincture of Senna, with half an ounce or ſix drams of Glauber's Salt.*" A ſufficient quantity of this was given, diluting with weak mutton broth, and an opiate at night.

The aſtringent he uſed, after the fever was gone, in the advanced ſtage of the diſeaſe, was made by boiling "*fine Engliſh Oak Bark, Pomegranate rind, and Tormentil root, of each an ounce, in ten pints of ſpring Water, till it was reduced to a gallon; adding, towards the end, two ounces of bruiſed Cinnamon, ſo as to boil half an hour; when the decoction grew cold, about a gallon was ſtrained off, and four ounces of ſtrong Cinnamon Water were added, beſides two ounces of Gum Arabic, and a little Sugar.*" About the quantity of four ounces was ordered three

or

or four times a day. This medicine was ſometimes aſſiſted by a large doſe of an opiate, and more powerful aſtringents, as the following electuary; "*take powder of red Roſe leaves, and of newly boiled Mutton kidney Suet, of each four ounces, a dram of Locatellus's balſam, or about two ſcruples of Balſam. Capivi, beat them up together into an electuary.*" The quantity of a large nutmeg of this, was preſcribed three or four times a day, in a draught of the above drink.

Every night and morning a combination of "*two grains of Opium, with three grains of powdered Ipecacuanha made into pills,*" proved highly ſerviceable to many at this time of the diſeaſe. *Red Port Wine*, diluted with water, with the addition of ſpices, is alſo recommended.

"If after all, the Flux ſtill perſiſted; "and if a Teneſmus alſo attended the "patient, then lenient purgatives, with "*Salts, Manna, and Sweet Oil*, were indiſ-"penſably neceſſary again."

PRINGLE, in his *Obſervations on the Dyſentery, Ed.* 1768, finds fault with SYDENHAM for including, as dyſenteric caſes, thoſe diſeaſes, while the Dyſentery raged in the Autumn of 1669, where "ſeveral had no ſtools at all." But PRINGLE has taken only part of the ſentence relative to that epidemic; for SYDENHAM adds, "but with reſpect to the "ſevereneſs of the gripings, the violence "of the fever, ſudden loſs of ſtrength, "and other ſymptoms, it much exceeded "the Dyſenteries of the following years."

He ſays alſo, that there are ſome ſubſtances *omitted* by SYDENHAM, which are ſometimes ſeen in the ſtools, viz. "round "worms, balls of hardened excrements, "and ſome ſmaller bodies, of the colour "and conſiſtence of ſuet." And that among other ſymptoms, SYDENHAM has *omitted* the "flatulence;" and that he neither mentions a "procidentia ani, "nor a ſtrangury."

In

In theſe obſervations, PRINGLE does not appear to have known, that it was SYDENHAM's cuſtom, in treating of diſeaſes, invariably, to relate all the ſymptoms he ſaw, but no more: a cuſtom, I fear, *more honoured in the breach than the obſervance*, by many of his ſucceſſors. And from his well-known accuracy, as well as veracity, it is moſt probable he *omitted* nothing; but that none of theſe circumſtances (the firſt having no relation to the Dyſentery, and the laſt undoubtedly often the effect of miſmanagement) were ſeen in the Epidemic in queſtion, as neither he, nor WILLIS, mentions them. And here I again diſſent from the notion, that *Strangury*, and *Suppreſſion of Urine*, are genuine pathognomonics of the Dyſentery. I am ſenſible that in the Dyſentery, whenever the ſtools are copious and liquid, particularly in the *Dyſenteria Incruenta*, there may be but a very ſmall quantity of urine voided: for how ſhould it be otherwiſe when there is but little ſecreted, by all the fluids

fluids of the body being turned from their natural channels, and running off at the inteſtines?

This paucity, or deficiency of urine, DEGNER incorrectly calls a *Suppreſſion of Urine* *; and I perceive it has been by ſeveral writers after CÆLIUS AURELIANUS †, miſtaken and miſnamed in the ſame manner.

Strangury, and *Iſchuria*, or *Suppreſſion of Urine*, are abſolutely adventitious in the Dyſentery; and almoſt unknown where the too early and injudicious adminiſtration of opiates, or heating, or acrimonious, or aſtringent medicines (but particularly of opiates), has not previouſly taken place.

* *Urina* plerumque plane erat *ſupreſſa*, ut intra ſex, octo, decem, aut quatuordecim dies vix guttam emitterent.—In aliis vero ſtatim cum morbi adſultu aderat *Stranguria* moleſta.

DEGNER. *de Dyſent.* p. 18.

† Impedimentum urinæ redendæ.

C. AUREL. *Lib.* IV. *Cap.* 6.

This

This I believe to be the reaſon, that thoſe we eſteem the moſt accurate medical writers, have never mentioned theſe ſymptoms. DEGNER'S patients might have made no urine for ſeveral days, for that is natural in the Dyſentery, but a Suppreſſion of Urine is not. If Suppreſſion of Urine occurred, I make no heſitation to charge it to his practice, in the courſe of the diſeaſe, or to ſome injudicious treatment before he ſaw the patient; and that a Strangury occurring, "cum morbi adſultu," is not a legitimate relative of the Dyſentery.

PRINGLE ſays, "SYDENHAM takes no "notice of any contagion that attended "his epidemic; and that WILLIS ex-"preſsly ſays, that the Dyſentery which "he deſcribes, and which was the ſame "as SYDENHAM'S, was not infectious. "But all that we can infer from thence, "is, that either the diſtemper, which "they ſaw, was of a *milder nature* than "it uſually is when it becomes general, "or that this circumſtance of infection

"*eſcaped*

"*escaped their notice.*"—From this very extraordinary remark, one would suppose PRINGLE had never read WILLIS's account of the uncommon severity of that epidemic; and it is evident that SYDENHAM's minuteness in following facts, in which nothing escaped him, had no weight with PRINGLE, bewildered by an hypothesis.

He observes, that SYDENHAM was *defective* in that part of the history of this disease, which relates to dissections. But PRINGLE should have recollected that SYDENHAM found out a method of treating the Dysentery successfully; which deprived him of those fertile opportunities of making experiments on dead bodies, that have so often fallen to the share of many other people. I do not mean by this to say, that he never lost a patient, but to urge the probability of it; as he says, from the method he pursued, "the "disease generally yielded to the third "purge."

He

He ſays, "SYDENHAM, in the hiſtory "of the Epidemic Dyſentery of his time, "takes no notice of the weather: going, "I muſt ſay, upon a *falſe principle*, that "the morbid conſtitution of the ſeaſon "has never any connection with the ſen- "ſible qualities of the air. But that "WILLIS ſupplies this defect, &c." How far the whole of this remark is erroneous (admitting PRINGLE's authority, that SYDENHAM went on a *falſe principle)*, on the preſent occaſion, whatever might have been SYDENHAM's general doctrine, may be ſeen by referring to SYDENHAM himſelf*.

He ſays, "That at firſt ſight SYDEN- "HAM ſeems to have expreſſed himſelf "juſtly when he called a flux, *the fe- "ver of the ſeaſon turned upon the bowels.* "But upon a nearer view, we ſhall "find this notion more acute than "ſolid, ſince the circumſtance of its "being contagious ſhews that the Dy-

* Vide p. 290.

"ſentery

" ſentery is eſſentially different from theſe " fevers."—By this obſervation PRINGLE ſuppoſes, what I fancy no other perſon does;—that Dyſenteries are always infectious;—or that fevers never are;—or that Epidemic Dyſenteries are infectious, when Epidemic Fevers are not.

He ſays, he has known no ſuch progreſſion as SYDENHAM ſpeaks of, "the " inteſtines being ſucceſſively affected " downwards, till at laſt the diſeaſe be " driven to the rectum, and ends in a " *Teneſmus*."—But as every perſon elſe has known this progreſſion, who has had much practice in Epidemic Dyſenteries of long duration, it is remarkable that it ſhould have eſcaped PRINGLE's notice.

He ſays, " DEGNER offers good reaſons " for believing that the fatal Dyſentery " at Nimeguen, was owing to the infec- " tion communicated by one perſon."— But to me, thoſe which PRINGLE calls " good reaſons," are very bad ones, and like all reaſons that I have hitherto met with

on the ſame ſubject; for I conſider that the diſeaſe which appeared in the beginning of April, as a *Bilious Diarrhœa*, and continued through May and June, was aggravated into a Dyſentery in July, when the heat of Summer had increaſed, and the uſual dyſenteric ſeaſon had advanced: for it came in as Epidemic Dyſenteries in Europe generally do, at the end of Summer; then raged in Autumn, and declined at the ſetting in of the cold weather *.

He ſays, "in camp the contagion paſſes "from one who is ill, to his companions in "the ſame tent, and from thence perhaps "to the next. The foul ſtraw becomes "infectious, but the great ſource of infec-"tion ſeems to be the privies. The hoſ-"pitals likewiſe ſpread it, for thoſe who are "admitted with the flux, not only give it "to the reſt of the patients, but to the "nurſes and other attendants on the "ſick."

But, ſays he, "of what nature is this in-

* Vide page 304.

"fection?

" fection? I conſidered the ſpreading of the
" diſtemper (formerly) as owing to putrid
" exhalations from the humours of thoſe
" who fall firſt ill of it: and when this mi-
" aſma is received into the blood, I con-
" ceived it to act upon the whole maſs as a
" ferment, diſpoſing it to putrefaction.
" But I am now ſenſible that this *hypotheſis*
" would be inſufficient, without proving
" at the ſame time, that when the blood is
" thus tainted, the vitiated part of it, by a
" certain law in the animal œconomy,
" muſt be thrown upon the inteſtines for
" excretion. This notion of a putrid
" ferment, received ſome confirmation
" from a caſe which occurred, of one who
" was ſeized, indeed in a ſlight degree,
" with a Dyſentery accompanied with
" bloody ſtools, in making experiments
" upon human blood, which had become
" putrid by ſtanding ſome months in a
" cloſe phial. This caſe ſeemed to be more
" deciſive, as it happened at a time when
" the diſtemper was not heard of, and to
" a perſon in perfect health, who had
" for-

" formerly attended many dyſenteric pa-
" tients without being infected.

" For theſe reaſons, I was inclined to " refer the *cauſa proxima*, or the imme- " diate cauſe of the diſeaſe, to this pu- " trid ferment; but having ſince pe- " ruſed a curious diſſertation publiſhed " by LINNÆUS *, in favour of KIRCHER's " ſyſtem of contagion by *animalcula*, I " think it reaſonable to ſuſpend all hy- " potheſis till the matter ſhall be further " inquired into."

He ſays, in the beginning of his practice in the army, he uſed *Vitrum Ceratum Antimonii*, which he had formerly obſerved to be the beſt medicine in this caſe, for relieving both the ſtomach and bowels: yet the roughneſs of its operation, and the prejudice conceived againſt the Glaſs of Antimony as a medicine, having deterred other phyſicians of the army, and the regimental ſurgeons from

* Amœnit. Academ. Vol. V. Diſſert. 82.

ufing it, he alfo defifted. Inftead therefore of this preparation, he gave Ipecacuanha with, or without, Emetic Tartar, fo as to excite an operation downwards, which he found moft certain when he gave only five grains of Ipecacuanha, and repeated it at an hour's diftance, twice, or thrice, until a purging was brought on. He purged the next day, if the patient had only been vomited by the Ipecacuanha, or fparingly purged, with Rhubarb and Calomel; after the purge an opiate at night, with two or three grains of Ipecacuanha. The purge of Ipecacuanha, or Rhubarb and Calomel, to be repeated on the fourth day. The firft ftage of the difeafe being paft, he purfued the ufual track, with opiates, balfamics, and aftringents.

I cannot clofe the prefent detail, without obferving, that PRINGLE conceiving "SYDENHAM'S account of the Dyfentery, "to be upon the whole fo juft," that he thought it neceffary to make only "a "few obfervations to afcertain fome

"points

"points which he, SYDENHAN, has left "doubtful; and to add ſome others, for "rendering the hiſtory of the diſeaſe "more complete."

It was therefore in juſtice to PRINGLE that I have ſelected thoſe paſſages, which he thought were the conſummation of his undertaking; that he might loſe no credit, due to an attempt to correct the irreproachable accuracy, and to aſſiſt the incomparable genius of SYDENHAM.

BAKER, *de Dyſenteria Londinenſi, An.* 1762, ſays, an Epidemic Dyſentery appeared in London towards the end of July, 1762. It was preceded by very hot and dry weather. It raged all the Autumn, until November.

He remarks, that thoſe people who ate much Summer, or Autumnal fruit,

were exempt from the diſeaſe, or had it very mildly.

He generally gave a vomit in the beginning of the diſeaſe, and preferred Emetic Tartar, which, he ſays, not only cleanſed the ſtomach from a wonderful quantity of yellow and green matter, and relieved the patient, but it excited afterwards a general perſpiration over the whole body. He found that Ipecacuanha did not cauſe a ſufficient ſtimulus: and diapproves of it, for the very reaſon for which Piso commends it, as leaving an aſtringency after its operation:—"vim "quoque aſtrictivam poſt ſe relinquit."

He ſays, he knows no virtue in Ipecacuanha for the Dyſentery, beſides its emetic quality, and in that it is inferior to Emetic Tartar:—And if, according to Friend, Ipecacuanha is uſeful in the Dyſentery from cauſing perſpiration, it is inferior to Emetic Tartar even in that.

He

He ſays, Emetic Tartar, after its emetic effects have ceaſed, operates downwards, and cleanſes the inteſtines: and he ſuppoſes the *Vitrum Antimonii Ceratum* owed its reputation as an anti-dyſenteric medicine, to its emetic and purgative operations *.

He condemns Rhubarb as a purgative, particularly in the beginning of the diſeaſe: and where ſuch mild aperients as ſenna, manna, and tamarinds do not relieve, recourſe muſt be had to more active medicines, and before all others to the *Sal Catharticus Amarus*.

He diſapproves of Rhubarb when mixed with Calomel in the Dyſentery; and much more when nutmeg, cinnamon, and other ſpices are added to it.

He juſtly condemns heating medicines; and in the courſe of the diſeaſe he adviſes

* My opinion of the effects of this medicine, is mentioned in the Second part of this Treatiſe.

ſuch things as almond emulſion, white of eggs, ſtarch, ſalab, &c. And in the decline of it, milk with ſome freſh ſuet boiled in it, and a little ſtarch.

He ſays, the Iriſh common people take melted butter in the Dyſentery; and that among the Engliſh ſome people have taken a ſpoonful, or two, of it now and then, and have been cured by it.

He ſays, the Dyſentery in 1762 was ſpread by contagion among the common people, for want of cleanlineſs.

He cautions againſt the premature and improper uſe of opiates; and inſtances a caſe where warm bathing was uſeful.

In this elegantly written treatiſe, the general ſymptoms of the diſeaſe, and the epidemic of 1762, are accurately related. It contains alſo proper diſcrimination reſpecting bleeding, recommends the rejection of rhubarb, with many other therapeutical principles, to be regarded in general practice; particularly uſeful where formidable

formidable Dyſenteries prevail, as in hot climates.

But this judicious and learned phyſician's opinion of the utility of fruit, is leſs applicable in thoſe climates: and in reſpect to the "difficultas urinæ,"* it is unneceſſary to repeat my ſentiments, but I will add thoſe of HIPPOCRATES. He ſays, in a ſeaſon when (*Incruentous*) Dyſenteries prevailed, with great diſcharges of a bilious, thin, acrid, and watery nature, —Πολλοῖσι τοὶ καὶ περίῤῥοιαι μετὰ πόνου χολώδεες, ὑδατώδεες, ξυσματώδεες, πυώδεες, στραγγουριώδεες. Ου νεφριτικὰ, ἀλλὰ τουτέοισιν ἀντ' ἄλλων ἄλλα †.

MONRO, in his *Account of the Diſeaſes in the Military Hoſpitals in Germany, from January* 1761, *to March* 1763, ſays, "it "is now generally agreed that this diſ"order is entirely produced by ſuch "cauſes as make the juices become too "putreſcent, and turn the flow of hu"mours to the bowels; and in the camp "it ſeemed to ariſe principally from ob-

* Opuſcul. Med. p. 38.

† De Morb. Vulg. Lib. I. Sect. 2.

" ſtructed perſpiration, cauſed by the " men's lying in the field, and doing mili- " tary duties in all ſorts of weather; at " the ſame time being often expoſed to " the putrid ſteams of dead horſes, of the " privies, and of other animal or vegeta- " ble ſubſtances, after their juices had " been highly exalted by the heat of " Summer."

He does not ſuppoſe fruit to be among the cauſes of this diſeaſe, and ſays, " ge- " nerally in Auguſt and September we " have people admitted into St. George's " Hoſpital for the Dyſentery, who have " certainly not catched the diſorder from " eating fruit."

He ſays, " moſt authors who treat of " the Dyſentery, mention the ſymptom " of worms *.

In the cure, when the patients were

* It does not occur to me that many authors have mentioned even the *voiding* of worms in this diſeaſe; and ſurely thoſe who have, never meant to conſider them as a dyſenteric *ſymptom*:—to which they have no more relation than to the ſmall-pox, or meaſles.

young

young and ſtrong, and complained of ſharp pains of the bowels, attended with a fever, he uſed the lancet freely; nor was he diſcouraged from bleeding in the beginning by low quick pulſe, which often attended the diſorder: and he frequently found the pulſe to riſe as the blood flowed from the vein.

A vomit of Ipecacuanha, ſometimes with the addition of Emetic Tartar, was given after bleeding, which was repeated in the courſe of the diſeaſe if the ſickneſs returned, and the flux obſtinate.

On the following day a purge was given, but as rhubarb, on repeated trials, did not anſwer, he ſays, he gave "*Sal Ca-*"*tharticum Amarum, with Manna and Oil,*" which was repeated every ſecond or third day, with an opiate at night.

He ſays, "the *Vitrum Ceratum Antimonii* "proved often too rough a medicine, "and therefore we laid it almoſt intirely "aſide."

In

In the progreſs of the diſeaſe, he ſays, a ſpoonful of the *Mixtura Fracaſtorii*, taken after every looſe ſtool, and an anodyne draught at night, had a good effect with ſome—repeated doſes of the *Philonium Londinenſe* anſwered better with others—and others found more benefit from the *Mindereri* draughts, with *Mithridate*, or the *Confectio Cardiaca*, or the *Theriac* Anodyne Boluſſes. The *Mixtura Campechenſis*, both alone and with *Tinctura Thebaica*, checked the purging, and gave relief ſometimes; and the addition of ſome Extract of Bark, and Tincture of Cinnamon, ſeemed to increaſe its efficacy in two old caſes; but it afterwards occaſioned ſuch ſickneſs, that its uſe was diſcontinued.

In other inveterate Dyſenteries, he added a ſmall portion of alum to the Logwood Julep, which, as well as equal parts of Diaſcordium Electuary, and Electuary of Bark, taken to the quantity of a dram twice or thrice a day, was uſeful in many old fluxes, but ſometimes otherwiſe.

He

He ſays, repeated ſmall doſes of Ipecacuanha did not anſwer; nor did Ipecacuanha mixed with Opium, often produce any remarkable change for the better. Purges were given from time to time, during the uſe of aſtringent remedies.

DESPORTES, in his *Hiſtoire des Maladies de Saint Domingue*, ſays, that in the treatment of the Dyſentery he uſed emollient glyſters of Decoction of Tripe, and Plantain, with ſome Buds of the *Monbin* (Hog Plum Tree), and of the *Grand Couſin**. He purged the patient with Tamarinds, Mirobolans, and Manna, in Whey: ſometimes adding Syrup, made of Succory and Rhubarb. If the diſeaſe continued, he had recourſe to Laudanum, *Caſhew Gum*, and to Amber, mixed up with ſyrup. He gave alſo a Ptiſan made of *Bois Marie* (Anchovie Pear Tree), *Bois de Chandelle* (White Candle Wood, or Roſe Wood), the tops

* Agrimonia of *Sloane*, Triumfetta of *Plukenet*, Bur-Bark of *Browne*.

of

of *Apiaba, ou Herbe quarrée* (Indian Spikenard), *Maïs* parched (Indian Corn), of each of theſe a very ſmall handful, boiled in a quart of water, until a fourth part was conſumed. When the patient began to recover, he put him on the uſe of a pottage made of *Gombo* (Okra). Sometimes the diſeaſe terminated in an abſceſs in ſome of the viſcera. If it was formed in the convex part of the liver, it was cured by opening it, and with more ſucceſs there, than in France.

Poisonnier Desperriers, *Traité ſur les Maladies des Gens de Mer*, ſays, the Dyſentery is a common diſeaſe among ſeamen. It comes like a Diarrhœa, without pain, or Teneſmus that gives any inquietude, for the firſt few days; and without fever. Then ſucceed pains, bloody and fœtid ſtools and fever.

The cauſe of this diſorder, he ſays, is the ſame, as of almoſt all the diſorders

of

of ſeamen: an acrid humour following a ſuppreſſion of perſpiration, which in the Dyſentery is carried to the inteſtines.

He ſays, it attacks chiefly thoſe of ſtrong habits; for which reaſon people unuſed to the ſea, and crews of ſhips ſoon after their leaving a port, where their vigour has been recruited, are moſt obnoxious to it. It is alſo cauſed by a quick paſſage from a temperate to a Northern climate: and from North winds ſucceeding South winds, after cold rains.

Seamen, he ſays, quitting their work, wet with rain, and with ſweat, lay down in the open air, with their wet clothes on, or throw themſelves into a hammock, badly covered, and ſleep in that ſtate; which, he ſays, never ſhould be ſuffered on board a ſhip.

He ſays, in cold weather, and in the North ſeas, ſeamen ſhould have, inſtead of ſpirits, punch, or wine, beer, or cyder, as fermented liquors are proper to keep

up perſpiration, and aſſiſt digeſtion; which with ſleeping dry, and being well covered at nights, will prevent diſeaſes at ſea, and extinguiſh a dyſenteric diſpoſition.

He ſays, officers, and ſuch as are provided with neceſſaries, to guard againſt cold and moiſture, are leſs affected than the common men, with diſeaſes at ſea.

In the cure, he ſays, in the beginning, when the Diarrhœa comes on, it is neceſſary to evacuate the humours, by a vomit of Ipecacuanha, which is to be repeated, according to circumſtances, in the courſe of the diſeaſe, uſing no other aliment than broth, gruel, and rice; with ſometimes the addition of a little ſaffron, or cinnamon. Where the pains are great, and the ſtools become bloody, bleeding is ſometimes neceſſary: giving a ptiſan of viper-graſs root, ſarſaparilla, and pearl barley. A purge is then to be given of rhubarb, tamarinds, and manna. The patient is to be kept in bed, and not ſuffered

fered to walk about bare-footed; and the hatchways are to be kept ſhut near his bed.

A dram of diaſcordium is to be given every night, for ſome time, at bed-time, and frictions with dry flannels are to be uſed, to excite a gentle heat, to produce perſpiration: emollient glyſters are to be uſed; balſam of Locatellus, with ſome earths, are to be given, but not ſuch abſorbents, as may ſtop the excretions ſuddenly.

Zimmerman, in his Treatiſe on the Dyſentery, ſays, that there was an Epidemical Dyſentery in ſeveral parts of Switzerland, in the Autumn of 1765, which was preceded and accompanied by a bilious putrid fever. This Dyſentery was cured with a drink made of barley-water and cream of tartar; ſmall doſes of cream of tartar and rhubarb; purges of tamarinds, &c. He is an advocate for fruit,

 particularly

particularly grapes, in the Dyſentery, and follows a practice he has collected from modern writers on the Dyſentery, particularly from the celebrated TISSOT.

He relates, as an important diſcovery by Dr. *Moehrlin*, for obtunding the acrimony of ſix or eight grain doſes of the Vitrum Antimonii Ceratum, by the addition of *three or four grains of Marſh Mallow root, powdered*.

I cannot take upon me, from my own knowledge, to aſcertain what might have happened in *Swabia*; but in many other places, I have not been able to find that the gaſtric fluid paid the ſmalleſt deference to a few grains of marſh mallow root.

ZIMMERMAN informs us, that he avoided thoſe rocks, on which it ſeems many of his countrymen foundered through ignorance. He ſays, the *Breſlaw* phyſicians laid it down as an indication, in the cure of the Dyſentery, that the inflammation

inflammation ſhould be reſolved; and for that purpoſe recommended Tormentil root, Valerian, Nutmegs, Hungary powder againſt the plague; and the *Confectio de Hyacintho*. And that MARQUET, the Dean of the College of phyſicians at *Nancy*, forbad bleeding, and preſcribed Ipecacuanha, Rhubarb, Diaſcordium, and an aſtringent decoction, in an Epidemical Dyſentery in *Lorrain*, where, he ſays, ſome people were walking about the ſtreets at five o'clock in the afternoon, and were ſeized with it, and dead by ten o'clock at night.

He ſays, that the peaſants kill themſelves with brandy and ſtrong waters; and that a favourite medicine among them for the flux, is red wine and rotten cheeſe; by which vaſt numbers killed themſelves in the county of *Lenzburg*. This barbarous practice, he ſays, has been continued by ignorant phyſicians e er ſince the days of the famous SENNERTUS, by whoſe advice it originated.

Zimmerman does not appear to have consulted the ancients on this subject; cheese having been a popular remedy for the Dysentery in all countries, among the common people, in all ages.

I wish he had informed us where Sennertus recommends *Red Wine and Rotten Cheese* in the Dysentery; for I can find no such remedy, nor any idea leading to such practice, in the writings of that celebrated physician.

Sennertus says, *Lib. IV. Part* 1. *Cap.* 3. "Omnis caseus alvum sistit;" and adds, what I believe applies very properly, except to laborious people, "meatus obstruit, et calculo generando materiam præbet." He says also, new cheese is cold, and of a flatulent nature; and that the old and rotten sorts of it are the causes of many diseases; "antiquos nimis et corruptos cavere oportet. Atram bilem generant, et plurimorum morborum authores sunt." But cheese has been long and justly exploded from medicinal

medicinal uſe, in every country, except among the illiterate and ignorant.

CONCLUSION.

IN the treatment of the Dyſentery, authors differ but little, in the latter ſtages of the diſeaſe, and their difference there, is but of little conſequence. For unleſs the diſeaſe has been managed with judgment in the beginning, the patient is generally indebted for his recovery to the ſtrength of his conſtitution, or to ſome fortunate change that time, and not medicine, effects in his habit.

This is the reaſon that I have made what is relative to the firſt ſtage of the Dyſentery, the principal object of this treatiſe. Here authors differ widely indeed; and however ſucceſsful their practice may have been in particular epidemics, there

has been lefs done to ferve the purpofes of general practice, than might be expected from the united labours of fo many learned and excellent phyficians, at the only period of the difeafe, when method and medicine are of any importance. For I moft firmly believe, that if the difeafe is at firft judicioufly treated, and the patient properly prepared for the ufe of bark, with a fuitable regimen,—that horrid ftate of dragging on a miferable life, under an haraffing Dyfentery, or Diarrhœa, may almoft always be prevented.

It is under this conviction I have taken fo little notice of ftages of the Dyfentery, which I think ought not to exift; and have difregarded that part of the practice of others, where the only merit confifts in contriving fome greafy, glutinous, or ftyptic, and unnatural compofition,—which never can be ufed, but in violation of all the laws of animal œconomy.

It is certain that patients often err—

habits

habits of body vary—ſkilful advice is not always preſent—conveniencies are ſometimes abſent—fluxes may remain after febrile ſymptoms have ceaſed—chronical Dyſenteries, and Diarrhœas, will occur in practice—Therefore, though it is not my deſign to enter into a detail, already ſufficiently underſtood, I will communicate the beſt remedy I know in thoſe diſeaſes, for the reputation of which, I pledge the experience of twenty years. And I aſſure thoſe who will not be deterred from uſing it on account of its inelegance and cheapneſs, that they will find it productive of as much ſucceſs, as any rational perſon can expect from one medicine.

The diverſity of organization, temperament, and condition of the human frame is ſuch, that there cannot be in nature, what many good men have wiſhed for (but not for the purpoſe of concealing it for their own private advantage), an univerſal remedy in diſeaſes.

Curative indications muſt depend on ſymptoms;—ſymptoms are not uniform and unchangeable. Ignorance may pretend to, but reaſon denies the poſſibility of, SPECIFICS.

SOLUTIO VITRIOLICA.

℞ *Vitrioli Albi drachmas tres;*
Aluminis Rupei drachmam;
Coccinellæ Pulveratæ grana tria;
Aquæ ferventis libram. Miſce in mortario marmoreo. Solutio à fæculentia vel reſidendo expurgetur, vel per chartam bibulam filtretur.

In this ſolution, the proportion of either the vitriol or alum, may be augmented or diminiſhed, according to circumſtances; that is, when evacuations are required, the quantity of alum may be diminiſhed, or even intirely omitted; and when great aſtringency is required, the quantity of alum is to be increaſed, and the vitriol to be diminiſhed. The doſe is from a table ſpoonful to a tea ſpoonful, according to the ſtrength and age of the

patient,

patient, which is to be taken every morning fafting; and in fome cafes to be repeated every fix hours; without any addition or alteration, by diluting, or mixing it with any liquor whatever.

In flight Dyfenteries, and when the *Sudorific* procefs could not be put in practice, I have ufed this folution with the utmoft fuccefs: giving it at firft without the alum, in fufficient dofes to caufe evacuations, and afterwards with the alum in naufeating dofes, frequently, with opiates at nights. This I have found far more efficacious in the Dyfentery, than Emetic Tartar, Ipecacuanha, Rhubarb, or Salts, as evacuants, in whatever manner combined, or adminiftered.

But where a Diarrhœa has been of long ftanding, the cure neceffarily muft be performed by flow degrees; then a dofe every morning fafting, only, or every night and morning, will be fufficient. It is in inveterate cafes to be continued for

weeks, or months: omitting it now and then for a few days.

In table ſpoonful doſes it generally cauſes a vomiting, or great nauſea, or purging, for the firſt few times of taking it. When the ſtomach is foul, vomiting may be encouraged by drinking Chamomile tea, otherwiſe that is unneceſſary. If after taking it ſeveral times, it ſtill creates vomiting, or more nauſea than is eaſily ſupportable (for ſome nauſea is intended), the doſe muſt be diminiſhed. If it continues to purge more than is proper, or cauſes any griping, a few drops of Laudanum muſt be given occaſionally, or every night, at bed-time. It is not neceſſary to obſerve any particular regimen, merely on account of the ſolution; and the patient may eat, or drink, as ſoon after it, as its diſguſting taſte, or the nauſea it produces, will permit.

ON THE

ENDEMIAL CAUSUS,

COMMONLY CALLED THE

YELLOW FEVER

OF THE

WEST-INDIES.

THE *Endemial Causus*, or *Yellow Fever*, which is the terror of Europeans newly arrived in the West-Indies, is called by the French, *La Maladie de Siam.*

Monsieur POUPPÉ DESPORTES, who practised at *St. Domingue*, from 1732 until 1748, and who had more experience, and has

has written from better information on the diſeaſes of that colony, than any of his countrymen, ſays, this fever was ſo called from its being firſt taken notice of in the iſland of *Martinique*, at a time when ſome veſſels were there from *Siam*.

" Le premier événement qui l'ait fait " remarquer, a été la relâche, à la Mar- " tinique, d'une numbreuſe eſcadre qui " venoit de *Siam*, & dont l'équipage pen- " dant ſon ſéjour dans cette Colonie, fut " affligé d'une Fievre Maligne, ou peſti- " lentielle, qui fit périr un grand nombre " de matelots." And notwithſtanding this account of it by M. DESPORTES, he immediately ſays, " Cette maladie attaque " très rarement les *Créoles* ou les *Sauvages* " habitans de l'iſle: les Européens deſtinès " à vivre ſous un climat plus tempéré en " ſont, pour ainſi dire, les ſeules vic- " times *."

This account, though probably true enough as to the time of its being

* Vol. I. p. 191 & 192, Hiſt. des Malad. de St. Domingue.

firſt

first observed in the French colonies, is extremely incorrect in other respects: for M. DESPORTES has not only admitted a supposition that the disease originated among those East-Indian mariners, but calls it *pestilential*, and says, that Europeans are almost the only victims of it.

The generality of the French writers say, that the disease was brought directly from *Siam*, in a merchant ship, and communicated to the people of *Martinique*, from whence the contagion was carried to *St. Domingue*, but that sailors were the only people attacked by it, from whence it was also called *la Fievre Matelotte* *.

This account of the origin of the disease has been universally credited by the French writers, who have not been at the trouble to consider, that a disease brought from *Siam* in the East-Indies,

* The seamen at the *Cape*, in Hyspaniola, in the Summer of 1734 were, nearly half of them, cut off by this fever. It has often since that time made its appearance there among the sailors, and has been very fatal.

in

in a ſimilar latitude to the Weſt-Indian iſlands, would be moſt likely to affect the natives, living in a climate ſimilar to that in which the diſeaſe originated, rather than Europeans of ſo different a temperament of body. But the fact is, that the diſeaſe was not brought from *Siam*; and though it is poſſible, from the heat of the climate, that it may frequently appear there, or in any other tropical country, no hiſtory of that kingdom, that I have yet met with, mentions ſuch a diſeaſe*; notwithſtanding

* *Loubere*, in his Hiſtory of *Siam*, Part 2, Chapter 4, ſays, " among the moſt dangerous diſeaſes there, " are fluxes and dyſenteries, from which Europeans " that arrive at this country, have more trouble to de- " fend themſelves than the natives of the country, by " reaſon that they cannot live ſober enough. The *Si-* " *ameſes* are ſometimes attacked with calentures, in " which the tranſport to the brain is eaſily formed, " with defluxions on the ſtomach. Moreover, in- " flammations are rare, and the ordinary continued " fever kills none, no more than in other places in the " torrid zone. The external does ſo exceedingly weaken " the natural heat, that of an hundred ſick perſons, Mr. " *Vincent*, the provincial phyſician, declared, that he " ſcarce found one that had the fever, or any other hot " diſtemper.

ing what many writers have boldly advanced to the contrary *.

The Spaniards call it the *Vomito Prieto*, or the Black Vomiting, from its moſt direful ſymptom. By this diſeaſe their galleons ſometimes loſe the principal part of their men, in the Weſt-Indies, particularly at *Porto Bello* and *Carthagena*.

That this diſeaſe is a ſpecies of the καῦσος of HIPPOCRATES †, ARETÆUS ‡, and GALEN §, that is, *the Febris Ardens*, or *Cauſus*, as it is called, I think there can

" diſtemper. There are a great many cancers, ab-
" ſceſſes and fiſtulas. The eryſipelas is here ſo fre-
" quent, that among twenty men, nineteen are infected
" with it," &c.

* WARREN, a phyſician at *Barbadoes*, in his "*Trea-*
"*tiſe concerning the Malignant Fever in Barbadoes*,"
ſays, it is called "*La Maladie de Siam*, from a country
" of that name in the Eaſt-Indies, where it is a conſtant
" inhabitant." Page 3.

† Lib. de Vict. Rat. in Morb. Acut. et Lib. de Affectionibus.

‡ De Cauſo, Lib. II. Cap. 4. de Cauſ. et Sign. Acut. Morb.

§ Comment. 4. in Lib. de Vict. Rat. in Morb. Acut.

can be no doubt;—aggravated by climate —incidental only to the groſs, inflammatory, and plethoric—at any ſeaſon of the year—and totally different from the *Remittent Bilious Fever*, to which all habits of body are ſubject, in hot climates, particularly after rains, and in the fall of the year.

The *Cauſus*, the moſt ardent fever in temperate climates, as deſcribed by the fathers of phyſic, is a diſeaſe ſeldom ſeen in theſe northern parts of Europe; and never attended with that violence of ſymptoms, which accompany the ſame deſcription of diſeaſe in hot climates. And whether in latitudes ſo mild as that of Spain, Italy, Greece, and of the Archipelagan Iſlands, the *Cauſus* has ever been attended with *black* vomiting, as in the Weſt-Indies, I cannot tell. LOMMIUS mentions the vomiting of blood, and voiding black liquid ſtools, and black urine *.

Critical, and ſymptomatical yellowneſs

* Lib. I. Med. Obſ.

of

of the ſkin in the *Cauſus*, is enumerated among the ſymptoms by HIPPOCRATES*; and the accurate LOMMIUS particularly mentions the danger of that appearance before the ſeventh day; "grave eſſe periculum ſignificatur ubi aurigo ante "ſeptimum diem oritur †."

The affinity of the ſymptoms, progreſs, and termination of a *Cauſus*, in Europe, to thoſe of this fever of the Weſt-Indies, except the black vomiting, leaves no room to doubt that the difference of climate conſtitutes all the difference that is found between them.

The *Black Tongue* is always mentioned as a ſymptom in the *Cauſus*; of which appearance HIPPOCRATES has made a judicious diſcrimination, that all other writers have omitted:—the tongue, he ſays, "primum quidem pallida eſt, uti conſu-"evit, procedente vero tempore nigreſcit. "Quod ſiquidem per initia nigreſcat, ce-

* L. de Judicat. † Loc. Cit. HIPP. Aph. 62. Sect. 4.

"leriores

"leriores indicationes contingunt, ſi poſ- "tea tardiores *." Which is exactly the caſe in the Yellow Fever.

TRALLIAN ſays, in the *genuine* Cauſus the tongue is black, but not in the *ſpurious* Cauſus, yet he conſiders the latter as the moſt dangerous diſeaſe †; and LOMMIUS ſpeaks of the danger of the tongue being firſt dry, then rough, then black and foul ‡.

HIPPOCRATES mentions in other places, ſome circumſtances not enumerated in his deſcription of the *Cauſus*, that will be taken notice of hereafter, which we find correſpond with the Yellow Fever; and are convincing proofs that he had ſeen fevers attended with a vomiting of black blood (what the ancients ſometimes termed black bile), as in his prognoſtics he often mentions the fatality of that ſymptom, and ſome that were equally rapid with this diſeaſe.

* De Diebus Judicatoriis, Lib.

† Lib. XII. Cap. 3.

‡ Loc. cit.

Of

Of the *Caufus*, he fays, "Fit autem "Caufus cùm reficcatæ venulæ tem- "pore æftivo acres et biliofos tenues "humores, ad fe attraxerint, et febris "multa detinet, corpufque offearia laf- "fitudine vexatum laborat ac dolet. Fit "quoque magna ex parte, ex longo itinere, "et longa fiti, ubi arefactæ venulæ acres "calidafque fluxiones ad fe attraxerint. "Fit etiam lingua afpera et ficca, valde- "que nigra, et ob ventris morfum dolor "eft, alvi egeftiones tum valde liquidæ, "tum pallidæ fiunt, fitis adeft vehemens "et vigiliæ, interdumque mentis aliena- "tiones *."

He obferves, "In *Caufo* febris et fitis "vehemens detinet, lingua afpera et ni- "gra, fpiritus fanè caliditate redditur, co- "lor aliquantulum biliofus fit, et fputa "biliofa. In ægro partes exteriores fri- "gidæ funt, interiora verò admodum ca- "lent †."

* De Rat. Vict. in Morb. Acut.

† De Affectionibus Lib.

He ſays, there is another ſpecies of *Cauſus*, "In quo alvus ſubit, ſitis eſt in-"tenſa, lingua aſpera, ſicca, ſalſa, urinæ "intercipiuntur, vigiliæ torquent, et re-"frigerantur extrema *."

Of the two ſpecies of this diſeaſe, mentioned by HIPPOCRATES, GALEN denominates one a *genuine*, and the other a *ſpurious* Cauſus; one was ſuppoſed to proceed from bile, the other from phlegm. In the former the tongue was black, in the latter not. TRALLIAN, and other writers, have adopted this diſtinction. GALEN alſo remarks, that the coldneſs of the extremities is a ſymptom only of the ſpurious Cauſus, and then only when the fever is malignant; but that in the genuine, bilious, and burning Cauſus, the heat of the body is extended to the extremities.

He ſays, "Febrem *Cauſum* Medi-"cos reperio appellantes, cum urens ca-"liditas ſitiſque incompeſcibilis hominem

* De Rat. Vict. in Morb. Acut.

"torquet.

"torquet. Quod ſi ita habet *Cauſum* eum, "in quo corpus non uritur, ſitiſque levis "ſit, *Cauſum* quidem ſimpliciter, exquiſi- "tum autem legitimumque non dice- "mus *."

Aretæus, in his deſcription of the *Cauſus*, ſays, "Ignis paſſim et acer et te- "nuis eſt: ſed intus maxime. Spiritus "tanquam ab igne, calidus: aeris ve- "hemens attractio, frigidi cupiditas, "linguâ arida, in labiis et cute ſqua- "lor. Algent extrema, lotium quam "bilioſiſſimum, inſomnietas, arteriarum "motu crebri, parvi, imbecelli: oculi "puri, lucentes, ſubrubri: facies bene "colorata.

"Quod ſi morbus ulterius creſcat, om- "nia majora et ſæviora fiunt. Arteriæ "minimis motibus et creberrimis agi- "tantur: ignis aridiſſimus et acerrimus. "Mens delirat, omnia ignorat. Siticuloſi "fiunt, omnia frigida attractare cupiunt, "parietem, veſtem, pavimentum, humo-

* In Lib. Hipp. de V. R. in Morb. Acut. Com. 4. Sect. 13.

 "rem.

"rem. Manus frigent, ſed palmæ perquam "calidæ. Ungues livent, ſpiratio crebra "eſt, roſcidus humor circa frontem et "jugula. Quum ad ſummam ariditatem "caloremque corporis natura pervenerit, "tum calidum in frigidum, ſqualor in "imbrem convertitur. Rerum namque "ad maximam molem incrementa in "contrarium ſtatum prolabuntur. Ubi "ergo naturæ nexus ſoluti fuerint ea ſyn-"copa eſt. Tunc ſudor ingens toto "corpore funditur, et nullo pacto com-"peſcitur. Spiratio frigida eſt, vapor è "naribus multus exhalat. Siti non vex-"antur; cætera enim exaruerunt: quin "etiam alia inſtrumenta ſitiunt, os et "gula; urina tenuis et aquea redditur. "Alvus plurimum adſtricta eſt; non-"nunquam tamen pauca quædam bilioſa "deſcendunt. Copioſa et aliena humi-"ditas redundat, oſſa quoque tabeſcentia "diffluunt, et undique, ut in flumine, ad "exteriora omnia dilabuntur*."

LOMMIUS, in enumerating the ſymp-

* De Cauſ. et Sign. Acut. Morb. Lib. II. Cap. 4.

toms

toms, has taken in ſome, omitted by Aretæus, in the preceding relation.— "Summo incendio corpus extorretur, "idque intus magis quam foris. Ac- "cedit pertinax vigilia, et profundior "interdum ſomnus. Lingua arida, et "craſſa, et aſpera, ſubnigraque et amara "eſt. Spiritus difficillimè trahitur, inci- "pit affici morſu ſtomachus, cibique cu- "piditas perit, vehemens tum ſitis, tum "æſtus præcordiorum eſt. Alvus aliis "ſoluta, aliis compreſſa eſt. Ipſe æger "penitus inquietus morbum male ſuſtinet, "frequentique ſubinde delirio perturbatur. "Hoc febris genus, quoniam ſumme "vehemens eſt, brevi finitur. Itaque ſi "protinus ab initio ſigna exhibet bona, "pleriſque omnibus quarto die ſolvitur, "nullis poſt ſeptimum manet. Tum ve- "ro aut vomitio fit, aut alvus profluit, "ſudorve ex omni corpore, aut ſanguis è "naribus fertur *."

Notwithſtanding that degree of Cauſus which we call the *Yellow Fever*, appears

* Lib. I. Med. Obſ.

from the nature of the diſeaſe to be indigenous to the torrid zone, there was no notice taken of it in the Weſt-Indies until nearly two centuries had elapſed from their diſcovery.

ULLOA ſays, " the *Vomito Prieto* was " unknown at *Carthagena*, and all along " the coaſt, till the years 1729 and 1730. " In 1729 *Don Domingo* JUSTINIANI, " Commodore of the *Guarda Coſtas*, loſt " ſo conſiderable a part of his ſhips com- " panies at *Santa Martha*, that the ſurvi- " vors were ſtruck with aſtoniſhment " and horror at the havock made among " their comrades. In 1730, when the " galleons under *Don Manuel Lopez Pin-* " *tado* came to *Carthagena*, the ſeamen " were ſeized with the ſame dreadful " mortality; and ſo ſudden were the at- " tacks of the diſeaſe, that perſons walk- " ing about one day, were the next car- " ried to their graves. Unhappily, after " all the experiments of the ſurgeons of " the galleons, and phyſicians of the " country, no good method of treating

" the

"the diſeaſe has been diſcovered; no "ſpecific for curing it, nor preſervative "againſt it *."

WARREN, though he lived at *Barbadoes* in 1739, ſuppoſes it never appeared in that iſland, until about the year 1721, and that it was then brought from *Martinique*, in the *Lynn* man of war. He ſays, the ſecond appearance of it there, was in 1733, and that it came alſo from *Martinique*.

He undertakes to ſhew, that it is a diſeaſe of *Aſiatic* extract, and ſays, that "a *Provençale* fleet arrived at *Port St.* "*Pierre*, in *Martinique*, from *Marſeilles*, on "board of which were ſeveral bales of "Levant goods, which were taken in at "*Marſeilles*, from a ſhip juſt arrived from "*St. Jean D'Acre* (probably the *Ptolemais* "of the ancients). Upon opening theſe "bales of goods at *Port St. Pierre*, this "diſtemper immediately ſhewed itſelf, "many of the people were inſtantly

* Voyage to South America, Book I. Ch. 5.

"ſeized, ſome died almoſt ſuddenly, others "in a few days, and ſome lingered longer; "and the contagion ſtill ſpreading, made "great havock at the beginning;"—and that he had this account from Mr. *Nelſon*, an Engliſh ſurgeon, who was ſeized with the diſeaſe in *Martinique*, and died of it a few days after his arrival at *Barbadoes*.

He ſays, it is "probable that the ſame "fever, or one of very near reſemblance and "affinity, might firſt have been carried "among the American Spaniards (among "whom it is now endemic), in ſomewhat "a like manner; and that poſſibly ſome "peculiar qualities in the air and climate "might have foſtered and maintained it "there ever ſince."

And yet, he ſays, "ſea-faring people "and new-comers are moſt obnoxious "to it; ſuch as had from purer blood, "and probably leſs aduſt than the na-"tives; or of thoſe whoſe conſtitutions "had been, for many years, fitted and ha-"bituated to the climate *."

* Pages 5 and 6.

How

How a climate ſhould foſter a diſeaſe, and a contagious one, and the natives of that climate be exempt from it, I cannot comprehend: But the whole ſtory is fabulous; therefore it is unneceſſary to reaſon on it.

Towne, who practiſed in *Barbadoes* ſeven years, and who wrote on the diſeaſes of that iſland before him, in the year 1726, takes not the leaſt notice of this chimerical origin of the *Yellow Fever*, but conſiders it as an endemical diſeaſe in the Weſt-Indies, to which Europeans are ſubject on their firſt arrival. And Hillary, who wrote long after them both, ſays, it is "indigenous to the Weſt-"India iſlands, and that it moſt com-"monly ſeizes ſtrangers, eſpecially thoſe "who come from a colder or more tem-"perate climate." He ſays, "a better "inquiry would have informed Warren "that the diſeaſe had appeared in Bar-"badoes, and the other Weſt-India "iſlands many years before: for ſeveral "judicious

"judicious practitioners who were then, "and now are living (about the year "1760), whose business was visiting the "sick, some of them almost eighty years "of age, who remember to have seen "this fever frequently in this island, not "only many years before that time, but "many years before that learned gentle- "man came to it*."

Hughes, who was not himself a medical man, says, in his Natural History of Barbadoes, "that *Doctor* Gamble "remembered that it was very fatal "in the year 1691, and that it was "then called *the New Distemper*, and af- "terwards *Kendal's Fever*, the *Pestilential* "*Fever*, and the *Bilious Fever*. That the "same symptoms did not always appear in "all patients, nor alike in every year, when "it visited us. It is most commonly rife "and fatal in May, June, July, and Au- "gust, and then most among strangers;

* Page 144.

"though

I

"though a great many of the inhabi-"tants in the year 1696, died of it; "and a great many at different periods "ſince *."

WARREN, poſitive as to the origin and peſtilential nature of this fever, invented a treatment (in which bleeding was ſeldom or never to be performed, and the patient to take heating alexipharmics, and to be covered up with blankets) conſiſtently erroneous with his pathological principles. Yet among all this perverſion of reaſon, the rays of an excellent underſtanding frequently break forth, through the clouds of hypothetical chaos.

But WARREN addreſſed his book to MEAD, whoſe tenets he had imbibed; and MEAD was the ARCHIMEDES of phyſic:—give him but his poſition, and the whole Æſculapian world was turned upon the axis of a ſyllogiſm.—Nature

* Page 37.

was

was in thoſe days empiriciſm, and contagion and infection were faſhionable doctrines.

THUCYDIDES ventured only the reputation of common report, in tracing the plague of Athens through Africa and Egypt, down from *Æthiopia* *. But MAT-

* *Diodorus Siculus*, *Lib.* XII. *Cap.* 7, gives a very rational account of this plague; he ſays, "The Athenians "during this incurſion, durſt not come into the field, "but kept cloſe within the walls of their city; by reaſon "whereof a great plague raged among them. For a "multitude of all ſorts of people being crowded toge-"ther, it may be reaſonably concluded, that through "the ſtraightneſs of the places, the air was corrupted "and cauſed the infection." And of the ſecond plague, he ſays, "Abundance of rain had fallen in the Winter, "by reaſon whereof the earth being over wet in many "places, eſpecially in low and hollow grounds, the "water lay like ſtanding pools; and thoſe being putre-"fied and corrupted by the heat of the Summer, thence "proceeded a miſt of groſs and ſtinking vapours, which "corrupted the air, as it often happens about filthy "marſhes; and beſides, the want of food much ad-"vanced the progreſs of the diſeaſe, for the year before, "the fruits, by too much rain, were crude and un-"wholeſome.

"There

MATTHÆUS VILLANUS and MEAD ventured much farther: the former found no difficulty in bringing the plague, which originated in Venice in 1348, from Greece: and the latter in making the *Sudor Anglicanus* a mutilated plague, and

"There was likewise a third cause of this distemper, "which was this: the *Etesian* winds (northern winds), "which come at stated and certain times of the year, "did not blow this Summer, by whose gentle breezes "the violent heat was constantly allayed, before, at "other times: so that the heat being now excessive, "and the air as it were inflamed, men's bodies now "wanting the usual refreshment, contracted an evil habit, from whence arose, through the vehement and "immoderate heat, all sorts of burning distempers; and "hence it was, that many seized with this disease, to free "themselves from the burning heat that was in their "bodies, cast themselves into pits, and wells. But the "Athenians judged that so grievous a distemper was "from God, and therefore, according to the charge "given them by the oracle, they purged the island of "*Delos*, which was formerly dedicated to *Apollo*, now "polluted, as they conceived, by burying many dead bodies there. Therefore all the graves of the dead were "dug up, and the urns were transported into the next "island, *Rhene*; and a law was made that it should not "be lawful for any, for the time to come, either to bury, "or to bear a child in *Delos*."

transporting

tranſporting it from the ſiege of *Rhodes* by the *Turks*; notwithſtanding the diſeaſe appeared five times, after long intervals, in this country, where it unqueſtionably was a genuine endemic. However, neither of theſe two gentlemen would, I believe, have ventured to follow the contagion of the Yellow Fever from *Palaſtine* to *Marſeilles*, and from *Marſeilles* over the Atlantic Ocean, to the *Weſtern World*.

Worthy of imitation as the laudable efforts of TOWNE, and reſpectable as HILLARY's accuracy in deſcribing what he had actually ſeen, were, much improvement in the treatment of diſeaſes has ſince their time taken place in that part of the world; therefore, and conſidering the ſtate in which they found phyſick in the Weſt-Indies, we muſt look back with candour on their practice where we find it defective; for they have done a great deal, deſerved well in their profeſſion, and great praiſes are certainly due to them: For among the adven-

turers

turers in phyſick, in the Weſt-Indies, ſince their firſt ſettlement, the principal object ſeems to have been the acquirement of wealth; and TOWNE and HILLARY, almoſt alone, have left behind legacies, collected with great labour and patience, which conſummate the character of friends to their country. *Non nobis, ſed rei publicæ nati ſumus.*

Perhaps this conſideration has prevented many from venturing, where TOWNE and HILLARY have gone before, and muſt appear in evidence againſt them. But this is a timid error; for practice every day improves our art. There is no more reaſon why all progreſs ſhould ſtop with TOWNE and HILLARY, than that it ſhould have ceaſed with HIPPOCRATES.

However, this conſideration ought to have deterred ſome perſons, who juſt looking at the iſlands during the war, or who have made a ſhort, obſcure reſidence there, and could not have learnt

to take care of themſelves, from giving their opinions to the publick on diſeaſes that they can ſcarcely have ſeen: or at leaſt, by wanting opportunities of comparing a variety of caſes, and the occurrences of many years, can never have attained a certain knowledge of the cauſes of diſeaſes, nor a competent method of treating them.

It requires a very fertile invention to make a few months voyage to the Weſt-Indies, and bring home materials for a book, or a method of treating diſeaſes, which will not have a pernicious tendency if followed, or that can contain any thing uſeful, that is not collected from others. This can only be done by long reſidence, great practice, and obſervation.

But the Engliſh are not the only people who write on diſeaſes, they know nothing of, from experience; and direct regimen and phyſick by latitudes. Our brethren on the Continent are not behind hand in this practice.

A French

A French author, a Monſieur DE GARDANNE, has lately undertaken to publiſh Obſervations on the Diſeaſes of Seamen, very principally becauſe he was born in a ſeaport town; as he ſays himſelf—but as his countryman DAZILLE ſays of him, "Monſieur DE GARDANNE "nayant jamais paſſé les Mers*."

Monſieur DE GARDANNE's mode of acquiring his knowledge is curious and intereſting. "Né dans un port de mer, et "naturellement initié à la connoiſſance "de l'art du navigateur, tant par un long "ſéjour dans les places maritimes, que "par l'habitude de vivre au milieu des "perſonnes qui ont embraſſé cet état, je "n'ai rien négligé d'ailleurs pour m'inſtru"ire à fond de ce qui pouvoit avoir rap"port à mon ſujet, ſoit en méditant les "auteurs qui m'ont devancé dans la car"riere; ſoit par des conférences aſſidues

* Obſervations Générals ſur les Maladies des Climats Chauds. Avertiſſement, p. 12. Publiſhed in 1785, at Paris.

" avec des perſonnes très éclairées ſur ce " ſujet*."

LIND has no quarter from this gentleman, for he ſays, " LIND prétend " que le défaut de végétaux qui en eſt " le principal défenſeur, n'y fait pas " grand choſe; qu'on peut même en " guérir dans l'air infect de l'entre-pont. " Mais ces idées ſyſtématiques ne doivent " point prévaloir ſur celles que l'experi- " ence avoit auparavant accréditées. Le " ſcorbut eſt cauſé par l'air chaud et hu- " mide; et tout que LIND avança pour " établir une opinion oppoſée, *ſera combattu* " *d'une maniere victorieuſe*, dans un Eſſai " ſur les Maladies de Gens de Mer qui ſui- " vra de près cet ouvrage †.

This gentleman commenced writer on

* Advertiſement, page 11, to his publication in 1784, intitled " *Des Maladies des Créoles en Europe*, &c. et " Obſervations ſur celles des *Gens de Mer*, et ſur quel- " ques autres plus fréquemment obſervées dans les " *Climats Chauds*."

† Page 47.

the

the *Diseases of Creoles in Europe*; and of observations on others more frequently observed in *hot climates*, having consulted authors who have written on those subjects; and from the practice he had in *Paris*. "J'avois consulté les auteurs "qui ont écrit sur les maladies des habitans des deux Indes."—"Les nombreuses observations que m'a fourni la "practique, depuis qu' établi dans cette "capitale *(Paris)* J'ai eu des occasions "plus fréquentes de les connoître, et de "les suivre dans leurs diverses affections *."

Another of these well qualified writers, in a publication in 1776, at Paris, intitled, *Des Moyens de Conserver la Santé, &c. aux Antilles, ou Climats Chauds et Humides, de l'Amerique*, speaking of the Yellow Fever, says, "C'étoit une sorte de fiévre colliquative trés-aigue."—"Cette Maladie "qui étoit contagieuse, fut d'abord traitée "par d'abondantes saignées, mais sans

* Avertissement, p. 1.

"succés: on fut plus heureux moyennant
"l'ufage intérieur des acides, et leur ap-
"plication extérieure. Ce que nous
"avançons ici n'eft que fur le rapport des
"autres; cette maladie n'exiftoit plus à
"notre arrivée aux Antilles*."

It is impoffible to fay what could give this gentleman an idea that the application and ufe of acids would cure the *Yellow Fever*, or what could induce him to fuppofe it was extinct; but the following curious queftions are not to be omitted:

"Quelles ont été fes caufes qui proba-
"blement n'ont été que paffagéres?
"Quelles ont été celles de fon *extinction?*
"Les caufes de cette maladie exiftoient
"elles dans le pays? Se rencontroient
"elles dans les bâtimens? Ou étoit-ce
"dans l'atmofphère qu'on traverfoit dans
"la route †?"

* Page 30. † Page 30.

The

The miſchief of this ſort of publication is infinite: for medicinal books, of all others, compiled from ſpeculation, hear-ſay reports, and extracts of letters from correſpondents, from being the worſt guides, are of the worſt conſequences to ſociety *.

DAZILLE properly remarks on this ſubject, in his advertiſement, that able phyſicians can collect together "*Obſervations* "*on Europeans in the Colonies, and on Sea*-"*men,*" made by others who were on the ſpot; but that it is indiſpenſably neceſſary to have practiſed a long time in the Colonies, and on board of veſſels, and there

* DOCTOR BARKER, in his *Agreement betwixt Ancient and Modern Phyſicians*, to ſtrengthen GALEN's caution againſt bleeding in very *hot weather*, ſays, page 92, he had "been informed by a learned and ingenious gen-"tleman, who has practiſed in Jamaica, it is found to be "much more dangerous to bleed in that warm climate, "than in the temperate one of England." This information was bad; and had it been otherwiſe, it does not apply to GALEN's meaning.

to have been much employed, and to know from repeated ſucceſs, and from what they have ſeen, themſelves, before they can judge of the utility, or the fidelity of the materials, of which their collections are compoſed *.

There

* "Si le Docteur LIND, cet homme juſtement célèbre, et le *traducteur* de ſon dernier ouvrage, Médicin "d'un vrai mérite avoient été aux Iles de *France* et de "*Bourbon*; le *Premier* n'eût point écrit, et *celui-ci* n'eût "pas tranſmis dans notre langue (page 103, du premier "volume), que ces Colonies ſont des lieux *mal-ſains*, "tandis que de toute la terre habitable, c'eſt un des "pays les *plus ſalubres*, àu l'on n'épreuve d'autres maladies, que celles qui y ſont apportées du dehors." Avertiſſement, p. 11.

DAZILLE's opinion of the iſland of *Bourbon* is certainly confirmed by every perſon who has been there: "L'air y eſt ſi ſain, et tout ce qui s'y produit y vient en "ſi grand abondance, et eſt ſi bon, q'un perſonne qui "voudroit ſe ſeparer du grande monde pour mener un "vie retirée, ne pourroit choiſir un meilleur lieu plus "agréable que celui la." LUILLIER, *Voyage*, p. 110.

ORM, in his Hiſtory of the Military Tranſactions in Indoſtan, ſays, that "ſeveral families from France "eſtabliſhed themſelves here, in the iſland of *Bourbon*, "ſoon

There is another evil with which the ſcience of phyſic is continually invaded; as if a knowledge of diſeaſes could be acquired in travelling poſt through a country. A tranſient practitioner, more zealous to diſtinguiſh himſelf, than to benefit mankind, no ſooner meets with a diſeaſe which he has never ſeen before, and perhaps does not remain long enough in a ſituation to ſee again, than he tranſmits an account of it to his agent, who tranſmits it to his literary friend; with whom it is converted into a purpoſe to ſupport ſome new hypotheſis, or is recommended as a ſample of the diſ-

"ſoon after the French took poſſeſſion of it, and from "them are deſcended the preſent inhabitants, who are "now multiplied to the number of 4000, of which 1000 "are men capable of bearing arms: theſe have not de-"generated from their anceſtors, but on the contrary, "are a race ſo remarkable for ſtature and proportion, as "well as for health and ſtrength, that they equal, if not "exceed in theſe qualities, the moſt athletic European "nations. They are the only colony of Europeans "eſtabliſhed within the tropics, which have preſerved "theſe advantages." Page 93. Vol. I.

eafes of a country, and the treatment, as a ftandard of practice. If this does not happen, when he returns home, he fits down and compiles a book, by racking and tormenting the fenfe of a variety of writers to his purpofe, without ever knowing whether the difeafes he treats of are endemic, or the produce of accident, or particular conftitution.—This is a premeditated commiffion of mifchief againft the welfare of fociety.

The refident practitioners in the Weft-Indies at prefent, are people of more fcience, and of better education than they were in the time of thofe I have mentioned. To them, or to fuch of them, as have had many years practice, the facts I now prefent to the publick in this treatife, are in general well known.

However, there are fome prejudices retained, in favour of vomits, and againft bleeding, that ought to be eradicated; and there is ftill a defect in not extending the antiphlogiftic procefs fufficiently

in

in the beginning of this diſeaſe. Againſt theſe errors in particular, it is neceſſary to warn inexperienced and tranſient practitioners; and ſuch in the navy and army, whoſe reſidence may not be long enough to acquire a thorough and competent knowledge of the endemics of thoſe countries. They muſt be guided by books, the beſt of which, thoſe who have been long in the habits of obſerving diſeaſes, well know, fall far ſhort of the deſign, and ſerve but as a guide to experience.

Concerning what I write, however it may be received as a contribution to the uſeful ſtock of medicinal knowledge, I ſhall at leaſt be free from the charge of writing on diſeaſes I have not had ample opportunities of knowing; and of recommending a practice compiled from the authority of others, that I have never experienced myſelf.

I am ſenſible of the reluctance and difficulty which attend laborious purſuits in

thoſe

thoſe ſultry regions, *ſub curru nimiùm propinqui ſolis.* The mind, enervated with the body, is rouſed to ſhortlived actions, by efforts that cannot laſt; and ſinks again under the oppreſſion of climate, to which all things in nature yield.

From hence ariſe great impediments to the advancement of ſcience: and that knowledge which has been gathered through a long ſeries of experience in thoſe countries, generally dies with its poſſeſſor.

This muſt ever be a ſubject of regret; for it is there that nature aſſumes all her variety of modes, and diſcovers many appearances, that are concealed in temperate climates. An obſerver there, will often find in her rapid changes, many fallacious ſyſtems overthrown, that have been begotten in cloſets by ſpeculation, in other parts of the globe.

Barbadoes has ever borne the palm of medical literature; *Jamaica* is greatly in

in arrears, though it has long been, and is at prefent numeroufly fupplied, with many well-informed and judicious practitioners; among whom Doctor DWARRIS holds a very diftinguifhed place: he has greatly contributed to the improvement of the practice of phyfick in that country.

This difciple of BOERHAAVE, through long and extenfive experience, has removed many errors that had been eftablifhed there before his time, by the ignorant and illiterate, who had lawlefsly affumed the profeffion.

He has alfo fuccefsfully oppofed many inapplicable doctrines, which, imbibed in European fchools, are often brought, improperly, into ufe in thofe climates. This has been of great advantage to thofe who have practifed with him, as well as to the patients, who frequently efcape the ill confequences of young doctors putting theory into practice.

In the *Endemial Caufus* of the Weft-Indies, fome of thofe fymptoms which have given names to the difeafe, are now but feldom feen, unlefs when the patient has applied for advice too late, or where improper advice has been unfortunately purfued: nor did I ever fee, or hear of an inftance, which LIND fuppofes may happen, that the "*Black* "*Vomit* may attack a man, when newly "arrived there, without any previous "complaint*."

That the black vomiting appears earlier in fome cafes than in others, is certain: and the earlier it appears, the greater certainty is there in the prognoftic of immediate death †.

From the various names given to this difeafe, improperly taken from its ultimate,

* Page 129.

† "Per quorumvis morborum initia, BILEM ATRAM "fupra vel infra prodire, lethale."

HIPPOCRAT. *Aph.* 22, *Sect.* 4.

and

and not from its primary ſymptoms, many difficulties have ariſen to young practitioners, and to ſtrangers in the Weſt-Indies: and the confuſion of terms has often been productive of fatal conſequences in practice.

TOWNE calls it, *Febris Ardens Bilioſa*; WARREN, a *Malignant Fever*; and HILLARY, a *Putrid Bilious Fever*.

WARREN attacks TOWNE, and HILLARY attacks WARREN, reſpecting the propriety of terming it *Bilious*: and I think I may venture to aſſert that neither of them has decided, whether Bile is the *Cauſe* or the *Conſequence* of the diſeaſe.

TOWNE appears to me to have had a more correct idea of the diſeaſe than HILLARY: and WARREN, I think, except in his deſcription of the ſymptoms, had ſcarcely any idea of it at all.

It is my opinion that the importance of the name of this fever, has not been ſufficiently

ſufficiently conſidered; and HILLARY, though he diſapproves of the appellation which ſome have given to it, evades the ſubject himſelf, as a diſpute only about words.

I own I differ from him widely; for among the miſchiefs which attend miſnaming this fever, or giving it a name that conveys no idea of its firſt appearance, a ſtranger will not know what diſeaſe it is when he ſees it; until it is accompanied by its fatal attendants, a yellow ſkin and black vomiting.

If this diſeaſe is called a *Malignant Fever*, the idea which is annexed to a malignant diſorder, will influence the treatment of it: ſuch practice as is neceſſary in an inflammatory diſeaſe, will never be thought of here, and the ſame miſtakes will be committed by others, as were committed by WARREN; who, from thinking it not only malignant, but *peſtilential and contagious*, inſtead of bleeding, and purging, on which in the beginning, the

the cure ſolely depends, he began by covering the patient up, and ſtifling him with bed-clothes, and alexipharmics, which muſt, as HUGHES obſerves, "have "very often failed *."

If it is denominated a *Putrid Bilious Fever*, what perſon in treating a putrid fever, would think of large and repeated bleeding in the beginning?—If it was a Putrid Bilious Fever, ſuch practice would certainly be improper; therefore, ſurely this term alſo muſt have an injurious tendency.

I have uſed the word *Yellow* in compliance with cuſtom; but I even diſtruſt that name; as the inexperienced may be looking out for that appearance, and not find, until it is too late, the diſeaſe he has to contend with. And indeed the yellowneſs of the ſkin, like the black vomiting, is not an invariable ſymptom of this fever;—thoſe who are fortunate enough to recover, ſeldom have it; and

* Hiſt. of Barbadoes, page 39.

many

many die without its appearance. Befides, the yellownefs alone, leads to nothing certain; it may arife from an inoffenfive fuffufion of bile, as well as from a gangrenous ftate of the blood.

The term to exprefs a difeafe by, fhould agree with fome circumftance that characterizes its attack, or firft appearance; for this difeafe is no more putrid, than the fmall-pox, or any other acute difeafe, which may, after it has paffed its inflammatory period, change to putrefaction, and end in death, with an extraordinary degree of diffolution of the fluids.

The truth is, that this difeafe is in the higheft degree poffible, an inflammatory one; accompanied with fuch fymptoms, in a greater extent, as attend all inflammatory fevers, and moft ftrikingly the reverfe of every difeafe that is putrid, or of one continued exacerbation *. It obeys no

* "Differt autem febris ardens, à continente putrida, "eo

no particular ſeaſon of the year; and attacks alſo ſuch people, and under ſuch circumſtances, as are ſeldom the objects of putrid diſeaſes.

In the hiſtory of this fever, on which a multitude beſides thoſe I have named, have tried their ſtrength in vain, having done nothing more than copy theſe originals, with the addition, perhaps, of ſome trifling medicine, or unimportant obſervation, the ſymptoms have been better deſcribed, than the diſeaſe has been treated.

An attentive obſerver may deſcribe a diſeaſe, though he may not know how to treat it properly: for though there can be but one way that is juſt, in deſcribing a diſeaſe, conformably to the ſteadineſs which nature always obſerves, yet there may be ſeveral ways of curing it, which

"eo quod hæc ex ſanguine putrefacto conflatur, et à "principio uſque in finem unam habet exacerbationem." AETIUS, *Tetr.* 2, *Serm.* 1, *Cap.* 77.

nature herſelf adopts, and in which ſhe is not conſtant.

People from colder climates, North Americans, and Europeans, on their arrival in the Weſt-Indies, as I have obſerved already in another place *, are ſubject to what is called a *ſeaſoning*. This ſeaſoning is underſtood to be the firſt illneſs they are attacked with; which, unleſs they live very temperately, or are in a proper habit of body, though ſome people are unmoleſted for many months, ſeldom ſuffers them to remain long before it makes its appearance, in ſome mode or other; particularly if, at firſt, they expoſe themſelves in a ſhower of rain, or too long in the ſun, or in the night air; or when the body is much heated, if they drink large draughts of cold liquors, or bathe in cold water; or uſe much exerciſe; or commit exceſs in drinking of wine, or ſpirits; or by otherwiſe heating the body, and inflaming the blood; or by ſubjecting themſelves to any cauſe,

* Page 69.

that

that may ſuddenly check perſpiration; which at firſt is generally exceſſive.

"Scio equidem nonnullos ob liberalem "vini potionem *Cauſo* fuiſſe correptos; "veluti in alios ob ſalſamentorum, ſalſa- "rumque carnium atque aliorum quo- "rundam ſalſorum uſum immoderatum; "alius ex ambulatione et æſtu veniens, "primum quidem lavit ſe, deinde do- "mum perductus vini miſti plus bibit, "cæpitque protinus affici *Cauſo*; alius au- "tem ob iram, et alius ob vigilias *Cauſum* "incurrerunt *."

Some people, from a favourable ſtate of body, have no ſeaſoning. Thin people, and very young people, are moſt likely to eſcape it; and women generally do from their temperance, and perhaps their menſtruation contributes to their ſecurity; indeed hot climates are favourable to the delicacy of their habits, and ſuitable to their modes of life. Some

* GALEN, Com. 4, Sect. 3, in Lib. HIPP. de Vict. Rat. in Morb. Acut.

escape by great regularity of living; some, by the breaking out of the rash, called the *Prickly Heat*; some by a great degree of perspiration; and some by observing a cooling regimen.

The disorders are various that constitute this seasoning of *new-comers*, as they are called, depending on age, constitution, and habit of body.

But all seasoning diseases are of the inflammatory kind, and yield to antiphlogistic treatment, proportioned to their violence.

Subjects most likely to be attacked by the *Endemial Causus*, are the florid, the gross, the plethoric;—that sort of strong, full, youthful people with tense fibres, who in England (to use a vulgarism) are said to resemble the picture of health. In short, so are all persons who are of an inflammatory diathesis, and do not perspire freely.

That

That this fever ſhould be called by the French *La Fievre Matelotte*, I think is very natural; and that ſailors, who eat, drink, and ſleep ſo much at ſea, and uſe no exerciſe, being always of a groſs habit of body, ſhould be attacked with it, more than other new-comers to the Weſt-Indies. The heat and dampneſs of harbours, generally in the neighbourhood of marſhes, always expoſed to land winds at nights; the labour on board of veſſels in port, lying ſtill at anchor, in the ſcorching rays of the ſun, and the careleſſneſs and exceſſes committed by people of this claſs, when they are on ſhore, after long voyages, muſt always ſubject them to the worſt evils, climate can produce.

When a new-comer is ſeized with a ſudden loſs of ſtrength, and a deſire of changing, for reſt, into every poſition, without finding it in any, thoſe ſymptoms which conſtitute the *Endemial Cauſus* may be expected. This is of great conſequence to be underſtood, and to be well remembered.

 When

When a new-comer is taken ill in hot climates, an intermiſſion is not to be waited for; diſeaſe muſt be ſtifled in its birth.

Suppoſing a perſon, anſwering any of the preceding deſcriptions, juſt arrived in the Weſt-Indies, was to expoſe himſelf to the cauſes already mentioned, the probable conſequences would be, that tomorrow he would perceive an heavineſs, a laſſitude, an oppreſſion, and a loſs of appetite. This is the time to extinguiſh the diſeaſe; but Europeans and North Americans neglect it, as they are not accuſtomed at home to have recourſe to medicine, on the firſt moment of indiſpoſitions.

The following day, but ſometimes within twelve hours from the firſt indiſpoſition, the violence of the diſeaſe will commence, thus:—

There will be a faintneſs, and generally a giddineſs of the head, with a ſmall degree of chillineſs and horror, but never

a ri-

a rigor *. Then immediately will ſucceed a high degree of fever, great heat, and ſtrong beating in all the arteries of the body, particularly obſervable in the carotid and temporal arteries: fluſhings in the face, gaſping for cool air, white tongue, but tinged with yellow after the retchings have commenced; exceſſive thirſt, redneſs, heavineſs, and burning in the eyes; heavineſs and darting pains in the head, and ſmall of the back, and often down the thighs; pulſe quick, generally full and ſtrong; in ſome caſes quick, low, and vacillating; ſkin hot and dry, ſometimes with a partial and momentary moiſture; ſickneſs of the ſtomach, from the firſt, which increaſes with the diſeaſe, and immediately after any thing is taken to quench the thirſt, retchings ſucceed, in which bilious matter is brought up; anxiety with ſtricture, ſoreneſs, and intenſe heat about the præcordia; great reſtleſſneſs; heavy reſpiration; ſighing; urine deep

* "Cum rigore non irruit.—Neque rigor exacerbati-
" ones præcedit."

AETIUS, Tetr. 2, Serm. 1, Cap. 77.

co-

coloured and but little in quantity. This is the firſt ſtage of the fever, and many continue 24, 36, 48, or 60 hours, and this conſtitutes its inflammatory period.

The ſecond ſtage begins with an abatement of many of the preceding ſymptoms, and the riſe of others:—ſometimes with a deceiving tranquillity, but with perturbation, if the patient ſhould fall into a ſleep; then a yellow tinge is obſerved in the eyes, neck and breaſt; the heat ſubſides, and ſometimes with a chillineſs. But not with that ſort of ſtrong rigor*, which, when it happens, terminates the diſeaſe by ſweat, or by copious bilious evacuations, upwards or downwards. The retchings increaſe and turn poraceous; the pulſe flags, but is ſometimes high and ſometimes ſoft; the ſkin moiſt and clammy; urine in ſmall quantity,

* "Cauſo detento, ſi rigor ſucceſſerit, ſolutio con-"tingit." HIPP. Aphor. 58, Sect. 4.

"Febrem autem ardentem, quam Græci καυσώδη vo-"cant, ſubitus horror exolvit."

CELSUS, Lib. II. Cap. 8.

and

and of a dark croceous colour; the tongue, in ſome caſes, is dry, harſh, and diſcoloured; in others it is furred and moiſt; confuſion in the head, and ſometimes delirium, with the eyes glaſſy. This ſtage of the diſeaſe ſometimes continues only for a few hours, ſometimes for 12, 24, 36, or 48 hours, but ſeldom longer.

It is in the beginning of this ſecond ſtage when attempts have failed, or have been neglected in the inflammatory ſtage, that the great ſtruggle is to be made, between life and death.

In the third and laſt ſtage of the fever, the pulſe ſinks and becomes unequal and intermittent, ſometimes very quick; frequent vomiting, with great ſtraining and noiſe in vomiting, and what is brought up now, is more in quantity, and has the appearance of the grounds of coffee, or is of a ſlate colour; nothing can be retained in the ſtomach; difficult breathing; tongue black; cold clammy ſweats; eyes yellow, and ſunk; yellowneſs round the mouth and temples, and ſoon after over the whole body.

This

This universal yellowness growing deeper coloured, accompanied by an aggravation of all the other symptoms, is the immediate forerunner of death. Deep respiration; subsultus tendium; a convulsive kind of sighing; black urine; sometimes total suppression of urine; death-like coldness of the hands, feet, and legs; heat still about the pit of the stomach; delirium, and struggling to get up in the bed; faultering speech, trembling, blood oozing from the mouth and nostrils; sometimes from the corners of the eyes and from the ears; vomiting black bloody cruor; stools the same; livid spots about the body, particularly the præcordia; hiccup; muttering; coma; —death.

I have divided the disease into three stages, because, between the *Inflammatory* and the *Gangrenous State*, there is a distinct period of its *Metaptosis*; a composure preceding mortification, as is observed on all other occasions, which sometimes gives sufficient length of time to perform the

the cure; though ſometimes it is of ſo ſhort a duration, that the patient ruſhes immediately, as ſoon as the inflammatory ſtate is paſſed, into the black vomiting. Sometimes, in this period of the diſeaſe, the ſymptoms are ſo mild, and the patient ſo tranquil, that the diſeaſe is ſuppoſed at an end, and all means neglected, or thought unneceſſary, until the ſtorm appears that ſucceeds this fatal calm, arrayed in thoſe dreadful forms I have enumerated, as characteriſtic of its third ſtage, and completes the cataſtrophe.

The preceding deſcription correſponds with the general order and manner of the diſeaſe, when the patient dies from the third or fourth, to the ſeventh day. But many patients do not experience all the ſymptoms that I have mentioned, which vary according to habit of body; ſome inclining to characterize the *genuine*, and ſome the *ſpurious* Cauſus, of the ancients. Some have no chillineſs at firſt, nor faintneſs, nor fluſhings in the face, and the pulſe is ſometimes

 deeply

deeply depreſſed, and not quick; and there are groſs habits of body which have been attacked in very ſultry weather, in damp ſituations, where the inflammatory period has been only of a few hours duration, the *Metaptoſis* has been ſo rapid, that the black vomiting, and the mortified ſtate, have unexpectedly appeared, and have ended the patient in 24, 36, or 48 hours. And on the contrary, there are ſome inſtances where the diſeaſe has been protracted to the eighth, ninth, or tenth day; and others where it has never paſſed from the inflammatory ſtage; but being checked, though not extinguiſhed, it has been lengthened out, and at laſt converted into a remittent of great duration, of moſt difficult cure, and tedious recovery.

During all the periods of the diſeaſe, great heat is perceived about the præcordia, and ſoreneſs and uneaſineſs complained of, in preſſing the hand upon thoſe regions. After death, livid ſpots appear over the whole body, particularly about

about the præcordia, which, as WARREN juſtly remarks, "ſeem from the beginning to be the chief ſeat and throne of the furious conqueror."

The cauſe of this uniform and particular ſuffering about the præcordia, I think is not what HILLARY has aſſigned; that the parts are near to the "ſeat of the liver and gall bladder;" and by no means proved, though "the gall bladder and its ducts are always found turgid with poraceous, blackiſh, and putreſcent bile;" but principally from the contents, or the condition of the ſtomach; at firſt from its hot, corroſive, acrid contents; at length from inflammation, from the convulſive motion of inceſſant ſtraining and vomiting. In ſhort, this viſcus ſeems to bear the chief burden of the diſeaſe, while life remains, and the principal internal veſtiges of its effects after death.

GALEN explains the cauſe of that ſenſation, which is perceived about the præcordia

cordia in the *Caufus*, to be from a flux of acrid humours thrown on the adjacent parts.

At the end of the difeafe, the ftomach, in fome part or other, is generally mortified where the black vomiting has been protracted, and when livid fpots have appeared on the body previous to death; for on infpecting many dead bodies I have always found fome part or other of the ftomach, and frequently the fuperior part of the duodenum in a gangrenous ftate, and never without evident marks of injury from inflammation, let the difeafe have been of ever fo fhort a duration. It has been faid, that gangrenous fpots have been obferved in the inferior parts of the curvatures of a very confiderable portion of the inteftinal canal, but this I have never feen.

Thefe appearances are univerfally produced by a Mortal Yellow Fever; but from the appearance of the liver, and gall bladder, though both muft be materially affected

affected in this diſeaſe, there is no inference to be drawn that can be depended on.

In the courſe of the diſeaſe, though there are ſome ſymptoms common to inflammations of the liver, yet there are more, to inflammations of the ſtomach; and none of the invariable ſymptoms which diſtinguiſh inflammations of the liver from all other diſeaſes.

There is no heavy fixed pain in the right hypochondrium, with inflation and tenſion, and hiccup, as when the concave part of the liver is inflamed; there is no evident and painful enlargement of the ſide, with acute pain in breathing, extending up to the neck, or top of the right ſhoulder, and dry cough; as when the convex part of the liver is inflamed.

This fever never terminates in ſuppuration of the liver, as in the *Hepatitis*; though

though it muſt be confeſſed it often does, in an enormous excretion of bile.

Diſſections have never diſcovered any certain and uniform appearance in the liver, of thoſe who have died of this diſeaſe.—In hot climates, a ſound ſtate of the liver is never to be expected, after death, whether the diſeaſe has been acute or chronical.—Of the latter claſs of diſeaſes, it is almoſt always, either the ſeat, or the origin.

It is unneceſſary to fill many pages with a long catalogue of preſcriptions and medicines, in the treatment of this fever, for it is compriſed in a few words, and almoſt as few medicines: and requires only care and attention that thoſe moments do not ſlip away, that the occaſion is for ever loſt, when

Bleeding,	*Diaphoretics,*
Purging,	*Bliſters, and*
Baths,	*Bark,*

ought to have been timely uſed, for the ſalvation of the patient's life; and that afterwards they are not untimely employed for its deſtruction.

If a perſon newly arrived in the Weſt-Indies, has ſubjected himſelf to any of the cauſes which may produce this fever, previous to its attack, he has ſufficient warning given him, if he will attend to it, and time enough in general to cure it by anticipation. For as ſoon as any heavineſs, or laſſitude, or reſtleſſneſs, or ſtretching and yawning is perceived, he has reaſon to expect that they are the harbingers of this tragedy, and he ſhould immediately be blooded, and take a doſe of ſalts, and dilute plentifully, and keep himſelf quiet and cool; and after the operation of the ſalts, he ſhould take ſmall doſes of *James's Powder*, live low, and drink barley-water. After the body is well evacuated, and cooled, it is always prudent to take bark.

In the firſt ſtage of the fever, when it has made a regular attack, when theſe precautions have not been uſed, or when they have failed, and the patient is no longer able to abſtain from his bed, he ſhould be kept in a large room, as cool as poſſible, covered lightly with bed-clothes, with a circulation of air admitted into the room, but not directly upon, or near the bed: and this muſt be obſerved through the whole of the diſeaſe.— "Amplo conclavi tenendus, quo multum "et purum aerem trahere poſſit; neque "multis veſtimentis ſtrangulandus, ſed "admodum levibus tantum velandus "eſt *."—"Et per flabellum aer ignavior "concitetur †."

Bleeding muſt then be performed, and muſt be repeated every ſix or eight hours, or whenever the exacerbations come on, while the heat, fulneſs of pulſe, and pains

* CELSUS, Curatio Ardentis Febris, Lib. III. Cap. 7.
† AETIUS, Tetr. 2, Serm. 1, Cap. 78.

continue;

continue; and if these symptoms are violent and obstinate, and do not abate during the first 36 or 48 hours of the fever, bleeding should be executed, *usque ad animi deliquium.*

The blood taken away in the beginning, is very florid, and of the arterial blood colour; and the surface never sizy, and seldom contracted.

The intention of bleeding can be answered only by performing it immediately, and in the most extensive manner, which the high state of inflammation, and the rapid progress of the disease, demand. Taking away only six or eight ounces of blood, because the patient may be faint, which is a symptom of the disease, is doing nothing towards the cure:—It is like ERASISTRATUS, giving *three drops of wine* to a patient, justly ridiculed by CELSUS *. Where bleeding is improper, no blood should be taken away;—where it is pro-

* Lib. IV. Cap. II.

per, that quantity cannot relieve;—and it is loſing that time which can never be regained.

Some practitioners who have not been witneſſes of the good effects of bleeding, from never having taken away a ſufficient quantity of blood, imagine that bleeding is not among the remedies for this diſeaſe. But this diſeaſe truly is not among thoſe that yield to the loſs of a few ounces of blood: for as BOTALLUS obſerves of the pleuriſy, peripneumony, and *Cauſus*, "num huic ſatis fuerit miſſio ſanguinis "unciarum decem aut duodecim? non "certe, ſed librarum vel duarum vel etiam "trium *."

Bleeding, it is evident, muſt not be performed in any other ſtage of the diſeaſe, than the firſt, or inflammatory ſtage, but this has been injudiciouſly done, which has given riſe to the notion, that

* De Curatione per Sanguinis Miſſionem, p. 112.

a pa-

a patient will ſeldom bear more than two bleedings.

Many practitioners have been deterred from bleeding their patients from the depreſſion of the pulſe, and from the faintneſs which ſometimes accompany the very firſt onſet of this fever; but here the pulſe always riſes, and the faintneſs diſappears, as the heart is relieved from its oppreſſion by the loſs of blood.

Faintneſs, and depreſſion of the pulſe here, is not to be conſidered like thoſe circumſtances, where putrefaction has commenced, or where there has been long and fatiguing illneſs; they are ſymptoms here of *Plethora*, the reverſe of inanition; and bleeding is adviſed for ſuch ſyncopes by two of the greateſt phyſicians the world has produced *.

HIPPOCRATES directs, "In morbis acu-

* *Aretæus* de Cur. Acut. Morb. Lib. II. Cap. 3. and *Alexander* of *Tralles*, Lib. XII. Cap. 3.

"tis ſanguinem detrahes, ſi vehemens "fuerit morbus et qui ægrotant ætate "florenti fuerint, et virium robore value-"rint."

Nor is fainting, during the operation, any reaſon for not repeating it, in the firſt ſtage of the fever; for I have often cured it by bleeding only: and it has frequently happened in the Weſt-Indies, that accidental bleeding from the orifice, when a patient has fallen aſleep, to far greater quantities than have ever been directed to be taken away, has carried off the fever intirely; and the ſurpriſe on diſcovering a profuſion of blood in the bed, has been changed to joy, for the alteration it has produced in the patient.

The efforts of nature would be oftener ſucceſsful than they are, were not her powers totally overcome in hot climates. Bleeding at the noſe, in the firſt ſtage of this fever, has ſometimes removed it; and

it is as certain a ſolution of this fever, as it is of the *Cauſus* in Europe *.

In the early part of the diſeaſe, ſpontaneous hæmorrhage is always critical, and ſhould never be ſuppreſſed; afterwards it is ſymptomatical, and if not ſtopped, the patient ſoon ſinks under it.

Eruptions about the lips and noſe, or phlegmous about the body, or an abſceſs forming, are alſo critical, and generally terminate the diſeaſe †.

Sweating, in the firſt ſtage of the diſeaſe, is ſeldom critical; for, as SYDENHAM ſays, on a ſimilar occaſion, "Non a præ-"via concoctione, ſed a confuſo parti-"cularum noxiarum motu, is elicere-"tur ‡."

* "Si e naribus profluxerit ſanguis, ſolvitur affec-"tio." HIPPOCRAT.

† "——— et ſi abſceſſus aliquis fiat."
HIPPOCRAT.

‡ Page 254.

Whenever ſweats are critical, which may happen very early in the diſeaſe, if the patient has been well evacuated, they are accompanied with a ceſſation of vomiting, and a change of the appearance of the urine; the ſweating then is to be aſſiduouſly promoted, and if preceded by a bleeding of the noſe, it is a complete criſis *.

The ſickneſs of the ſtomach, and diſagreeable taſte in the mouth, indicate the quality, and not the quantity of the offending ſecretions. The vomiting is from irritation in the ſtomach, and not from plenitude: therefore vomits are never to be given, though ſtrongly adviſed by TOWNE:—No, not ſo much as warm water, recommended by HILLARY, for fear of exciting and ſtirring up that terrible operation, which, when once begun,

* "Si ſudores judicatorii legitimi obvenerint, cum "urinis albis et craſſis, et levibus ſedimentis."

HIPPOCRAT.

no art can, ſometimes, allay. Neither will the firſt part of that council authoriſe the diſturbing the ſtomach in this fever, which he adviſes,

"Si os amarum fuerit, vomere con-
"ducit, et alvum ſubluere *;"—

For it will be found that the nauſea and vomiting will not only remain,

"Quod ſi ad hæc non ſolvatur....pur-
"gato †,"

but the ſtomach will be ſo aggravated, that no purgative will remain in it: it will be thrown up the inſtant it is taken, and we ſhall have defeated the very means that can only enable us to remove theſe ſymptoms.

The aphoriſm, "incipientibus morbis, "ſi quid movendum ſit, move," is no more an argument for a vomit than for

* Hippocrat. † Hippocrat.

a purge; and the operation muſt correſpond with the nature of the diſeaſe.

How often have I ſeen and lamented the effects of emetic tartar, given to remove the ſuppoſed cauſe of the treacherous ſymptom of vomiting! Even in ſlight degrees of fever in the Weſt-Indies, in young plethoric ſubjects newly arrived, the ſtomach has been ſometimes deſtroyed by it. Inſtead of removing the irritating ſickneſs in this fever, or exciting a diaphoreſis, a ſpaſm has been produced in the ſtomach; inceſſant vomiting; inflammation; the veſſels of the thorax and head have been ſtifled with blood, and the patient has vomited away his life.

Nature's index here is miſconceived: It is for aſſiſtance that ſhe makes theſe ſtruggles, ſhewing that the part is ſuffering deſtruction. It is not an indication that her oppreſſions are leaving her in that manner: for who ever ſaw, or

ever heard of a criſis from inceſſant vomiting?

When a ſufficient quantity of blood has been taken away, which is never done, let the patient's habit be what it may, while the heat, reiterated exacerbations, fluſhings in the face, thirſt, pains in the head, and burning in the eyes remain, the next ſtep is to evacuate the contents of the bowels, and turn the humours downwards.

The ancients were afraid of purging in acute diſeaſes; and from this general principle, and the old maxim, that "*concocted, but not crude humours are to be* "*evacuated*," many fatal miſtakes have happened in phyſic.

Hippocrates adviſes the patient to be purged (with boiled aſſes milk) in a Cauſus where the bitterneſs in the mouth continues: and Trallian recommends the cure to be begun with purging where the fever ariſes from bile,—with theſe reſtric-

restrictions; that the matter is ready for expulsion, and the attack of the fever not violent. He says, he has known purging successful in acute fevers; but that care and circumspection are necessary in this practice:—and that plentiful bleeding only, is a more safe and efficacious remedy, with a cooling and diluting regimen.

This fever is generally preceded and accompanied by costiveness; from which, and the incessant vomiting, ending in blood, it seems as if the cœliac artery acted the part by the constitution, here, on the stomach, that the mesenteric arteries do on the intestines, in a Dysentery.

But if large and repeated bleedings during the first two days, should not remove the thirst, pains, flushings, and heat in the eyes, and the state of the stomach should be such as to reject every thing that is taken, so that there is no chance of procuring evacuation by stool, the patient

tient ſhould have repeated purgative glyſters, and be put into a tepid bath.

"Lavandi ſunt qui fervida et perardenti febri laborant, in domo potiſſimum, ubi ſolium habeatur tepente aqua plenum, ut totum ægri corpus undequaque ab aqua operiatur*."

The bath ſhould be compoſed of a very weak decoction of chamomile flowers, in which a little nitre may be diſſolved, and ſome vinegar added.

This will often remove every ſymptom at once, and diſpoſe the patient to a *diaphoreſis*, which muſt be promoted until a ſufficient quantity of ſome purgative medicine can be taken, ſo as to make an effectual operation downwards.

There is ſeldom a neceſſity to repeat the bath, as the ſtrictures and tenſion generally yield on the firſt immerſion.

* TRALLIANUS de Cauſo.

The

The patient ſhould not remain long in the bath, nor ſhould it be deferred until late in the diſeaſe, for it can be of no uſe when the ſtomach is deſtroyed.

To aſſuage the vehemence of the thirſt attending a Cauſus, it was the cuſtom of the ancients to give the juice of cooling vegetables, and fruits, and large draughts of cold water, and acidulated drinks; and to apply cold, herbaceous, and acid cataplaſms to the ſtomach, and after GALEN, even to put the patient into a cold bath.

"Qui citra tumorem aliquem inflam-
"matum, aut eryſipelatum ægrotant, ubi
"concoctionis ſigna apparuerint in urinis.
"Quod ſiquis juvenis ſit carnoſus, tem-
"pore æſtatis, et conſtitutione calida ac
"ſicca, febre in vigore exiſtente, et con-
"coctione in urinis apparente citra viſce-
"ris alicujus inflammationem, et in lava-
"crum frigidæ natatorium ſeipſum inji-
"ciat, atque natet, ſudores utique com-
"moverit; ſi vero etiam ad frigidæ bal-

"neum

"neum aſſuetus fuerit, valde confidente
"hoc auxilio utatur. Quibuſdam enim
"ſtatim venter bilioſa egeſſit*."

The bold and deciſive practice of PAUL ÆGINETA in the Cauſus, conveys an adequate idea that the ancients thought this was a diſeaſe to be *extinguiſhed* at once: but if the means he purſued were equal to that intent, in the European, it is not in the Tropical Cauſus, without bleeding.

"Ex duobus alterum fieri neceſſe eſt, ſi
"ardens febris perfectè ſolvi debet, aut
"ut bilioſi humores *excernantur*, aut *ex-*
"*tinguantur*. Excernuntur igitur per ſu-
"dores, aut vomitum, aut infernam al-
"vum. Extinguuntur per frigidæ potum,
"per quem nos omnes ardentes febres
"curavimus †."

GALEN, from whom P. ÆGINETA has taken this doctrine, cured all his patients with cold water, and goes ſo far as to ſay,

* AETIUS, a GALENO. Tetr. 2, Serm. 1, Cap. 78.
† De Re Medica, Lib. II. Cap. 30.

he never loſt one, where cold water was given in a proper manner *.

But in giving cold water in the Cauſus, none of the ancients, except CELSUS, has obſerved ſufficient practical preciſion. TRALLIAN ſays, he gave it only in the True Cauſus, but not in the Spurious Cauſus. AETIUS ſays, cold applications, and cold things, ſhould not be uſed but in the height of the exacerbations, leſt they ſhould act as repellents, and ſhut up the inward heat; and that when any doubt remains about uſing cold water, at firſt, the chill ſhould be taken off.

CELSUS, with his uſual accuracy, ſays, cold water ſhould not be given before the fourth day, when the fever is at its height; then it ſhould be drank in great quantities, to cool the ſtomach and præcordia, and to procure a vomiting, where it is neceſſary; after which, the patient is to be well covered, that he may ſleep, by which means a profuſe ſweat will be raiſed, which, he ſays, is an immediate

* Com. 4, Sect. 12, in Lib. de Vict. Rat. in M. A.

relief.

relief. But it is not to be given unless there is great thirst, and heat, and never when there are any pains or swelling about the præcordia, or any complaint in the lungs, or fauces, or an ulcer, or faintness, or diarrhœa, or cough *.

Giving very large draughts of cold water in the Causus, to procure vomiting or sweating, after the manner of the ancients, is still practised in Italy, where this fever is a common attendant on the heat of summer. But they wait before they give it, until nature has in some measure conquered the disease. ERASTUS says, this was the practice in his time.

If cold water is used in our Endemial Causus, all the restrictions of CELSUS and AETIUS are necessary to be observed. But the misfortune here is, that cold water is improper in the beginning of the disease, and our Causus is too rapid in its termination, to admit of any delay, or

* Lib. III. Cap. 7.

 interval

interval that is not filled up with medicine. Cold water cannot be given at the ſame time the patient is under the operation of cathartics; and from the firſt moment of the diſeaſe, to the laſt, cathartics muſt be frequently adminiſtered. Our Cauſus does not give us time to ſolace patients with grateful things; and to uſe cold water as an evacuant, would be riſking the loſs of time for an inſufficient, or a doubtful remedy; as we muſt not look forward to a fourteen days termination.

The ſame objections operate againſt acids and fruit; and though lemonade, oranges, water melons, and granadillos, are extremely cooling and grateful, they interfere with operation of purgatives, diſorder the ſtomach, when uſed at the ſame time, and cauſe them to be rejected.

Vitriolic acid ſhould never be given; all acids are aſtringent, but this is particularly ſo: they contract the fibres of the ſtomach, and prevent purgatives from paſſing onwards through the inteſtines.

Beſides,

Besides, they destroy the effect of neutral saline purgative medicines. Lemon-juice and salt of wormwood, given in an effervescent state, is a proper auxiliary and febrifuge. But the acid and alkaline should be duly proportioned to the exact point of neutrality, and sufficiently diluted with water.

Soft, smooth drinks, free from any stimulating tendency, such as barley-water, always answer best for common drink, and are no impediment in the way of medicine.

Glysters are to be frequently given in the beginning of the disease, particularly where the patient is costive, and to precede the use of cathartics, and assist their operation.

The purging medicine to be used in the Yellow Fever is the *Tartarum Vitriolatum Crystallisatum* *, *dissolved in equal parts*

* Either the *Tartarum Vitriolatum* of the London, or the *Tartarus Vitriolatus* of the Paris, Pharmacopœia, in Crystals.

of Simple Cinnamon, and Common Water; or in Simple Cinnamon Water alone. It muſt be given in ſmall doſes, every hour, until it operates; and the patient is to dilute copiouſly while it operates, with very weak chicken broth. The quantity of the *Tartarum Vitriolatum* is four drams, to ſix or eight ounces of water (as much as the water will diſſolve), and the doſe of it may be two table ſpoonfuls. In defect of this medicine, Soluble Tartar, or Sal Catharticus Amarus, or Manna and Cream of Tartar, muſt be uſed. But let me caution practitioners againſt adding any Emetic Tartar, in order to quicken the operation of theſe medicines; which, however uſeful it may often be in bilious diſeaſes, may be fatal in this.

Purging generally completes the ſuppreſſion of the fever, and carries off the vomiting; but it muſt be continued while the ſtools remain bilious or fœtid, otherwiſe the fever will riſe, and the vomiting return.

In caſe the fever ſtill continues, the ſtomah

ſtomach ſettled, and the bowels well evacuated, recourſe muſt be had to ſudorifics: repeated doſes of *James's Powder*, effervefcent draughts, and plentiful diluting with barley-water, or balm, or mint tea, generally ſoon remove it.

An intermiſſion being procured, bark, in ſubſtance, is immediately to be given, and repeated every hour, in dram doſes, if the ſtomach will bear it, until twelve drams have been taken; which is generally a ſufficient ſecurity againſt the progreſs of the diſeaſe, but it muſt ſtill be continued, at longer intervals, for many days; interpoſing mild cathartics, ſuch as an infuſion of rhubarb and tamarinds, or by keeping the body from a coſtive ſtate, by glyſters.

Hippocrates, who ſeldom ſuppreſſed diſeaſes, or took them intirely out of the hands of nature, in the manner P. Ægineta treated the Cauſus, apprehended a relapſe, or ſome troubleſome complaint after a diſeaſe, where all the circumſtances

 had

had not appeared, which were ſuppoſed neceſſary to conſtitute a perfect criſis.

He ſays, of what GALEN calls the *genuine* Cauſus *, that unleſs a ſolution happens by bleeding from the noſe, or ſweats, with white thick ſedimentitious urine, or abſceſs, a relapſe will happen; or pains in the back, or legs, with thick expectoration, if the patient recovers: and that in the *ſpurious* Cauſus †, which was attended with a coldneſs of the extremities, but not with a black tongue, that a criſis never happens without ſome of theſe, or ſome other determinate ſymptoms having firſt taken place ‡.

* Rariſſime per abſceſſum judicatur.

GALEN, Comment. 4.

† Solvantur per abſceſſus magis, quam per excretiones, quæ ex pituita putreſcente oriuntur febres.

GALEN, Comment. 4.

‡ Judicatio minime contingit, niſi ſanguis ex naribus profluxerit, aut abſceſſus circa collum, aut crurum dolor oboriatur, et ſputa craſſa expuat (quæ alvo ſuppreſſa contingunt), aut coxæ dolor, aut pudendi livor obveniat. Teſticuli quoque contenſio judicationis ſignificationem facit.

De Rat. Vict. in Morb. Acut.

But

But the ancients had not the Peruvian Bark, which, if good, and given in a proper quantity during a fair intermiſſion, though none of their critical ſymptoms ſhall have happened, modern practitioners conſider their patient in perfect ſecurity.

In the ſecond ſtage, or *Metaptoſis* of this fever, which I believe will ſeldom happen where the preceding directions have been faithfully purſued; we muſt draw a diſtinct line, or boundary, in the very beginning of it, and put a final period to bleeding. In this alarming ſtate, all the ſkill and power of phyſic muſt be ſummoned up, and quickly too, to oppoſe the various breaches which the diſeaſe is now making, for the entrance of death.

The ſtrength now begins to fail; the pulſe is ſinking; the ſuffuſion of yellowneſs is perceived in the eyes, neck and breaſt; the vomiting inceſſant, and the ſtomach rejects every thing that is ſwallowed. A coldneſs here, not ſucceeded by ſweat, nor bilious diſcharges, is almoſt a certain mortal ſymptom.

In this ſtate nothing but purging can remove the vomiting, and ſave the patient's life: here the corruption of the humours begins, and the ſtools are acrid, corroſive, and fœtid to an extraordinary degree.

The misfortune here is, that the ſtomach retaining nothing, without great difficulty, oppoſes all our attempts. The *Tartarum Vitriolatum* is a nauſeous medicine, but there is no other proper medicine of which a ſmall quantity will purge, which is the objection againſt Tamarinds, Cream of Tartar, and Manna; nor is there any other that I have ever found equally effectual. It muſt be given: and though part of it will be returned, yet ſome of it will remain; and by repeating a very ſmall quantity every hour, ſtools will in time be procured, and generally urine, plentifully. If the patient has five or ſix ſtools, the vomiting will ceaſe; he muſt dilute with weak chicken broth.

Glyſters may aſſiſt, with warm fomentations frequently applied to the region

of

of the præcordia, which ſometimes bring out a crop of acrid eruptions about the pit of the ſtomach, on which the vomiting generally ceaſes; but in caſe theſe attempts fail, the patient ſhould be put into a tepid bath, and have a bliſter applied to his back, or to the inſide of his thighs, or, what is more effectual, to the region of the ſtomach; and a diaphoretic treatment adopted, with *James's Powder*, in order to relieve the internal irritation by revulſion, and enable the ſtomach to bear purgatives, which alone can carry off the offending humours, and remove that perverſion, as it were, of the periſtaltick motion, which is the ungovernable ſymptom, and by its continuance, the moſt certainly mortal ſymptom of this fever.

It is in vain to think of bark, and antiſeptics, though the approach of ſphacelation be evident. It is in vain to haraſs the miſerable patient with vitriol, and a multitude of nauſeous and tormenting drugs. If ſtools can be procured, and the bowels kept conſtantly looſe, ſo that the acrid and putrid colluvies are carried off,

off, as faſt as they are ſecreted from the diſeaſed maſs, that the ſtomach may be preſerved, and be able to retain bark, the diſeaſe may be conquered: if not, the patient will.

As to what is called fever, there is nothing after the firſt ſtage of the diſeaſe that deſerves that name; and therefore after the firſt ſtage, bark is always to be given, when the ſtomach will bear it. The worſt evil that generally attends giving bark here a little too early, is oppreſſion, and load at the ſtomach; which if glyſters do not remove, the purgative ſolution, or a watery infuſion of rhubarb, will; or the uniting ſome purgative medicine with the bark.

Sometimes, ſoon after the firſt attack of the fever, an abatement of every ſymptom is obtained; and thoſe who are not well acquainted with the pulſe, and what extenſive evacuations this fever demands, conclude that a remiſſion, or intermiſſion, or a ſolution of the fever, is decided. But when this happens before the third day, a ſtrict attention to the pulſe and the

the excretions, will difcover the deception; and fhew, by their difagreement with thofe fymptoms which appear favourable, that they appear fo without a proper caufe, and cannot be lafting.

Thofe who unfortunately make any dependance here, defift from farther evacuations, and proceed to giving bark, and cordial nourifhment. Every body about the patient is filled with flattering hopes of his recovery. But the evacuations have been difcontinued too foon, and have not been fufficient to extinguifh intirely the inflammatory difpofition of the difeafe;—which now aggravated, breaks out, and rages with redoubled violence, and hurries the patient into the fecond ftage of the difeafe, and then foon out of the world.

This circumftance of the Endemial Caufus, I believe, has never been noticed before. Thofe who have miftaken the *Bilious Remittent*, for this fever, confequently fpeak of remiffions, which do not happen in this fever.

Some

Some of the ancients juſtly referred all continued fevers, to ſome ſpecies of intermittent.

AETIUS ſays, a Cauſus which exacerbates every day, is a ſpecies of quotidian: that which exacerbates every other day, of a tertian, &c. and the difference only is, that the Cauſus never comes on with rigor, nor intermits:—but when it exacerbates every other day, there is diminution of fever, like a remiſſion *.

Theſe remarks are of infinite importance in hot climates, and if rightly underſtood, point out the different times for evacuations, or for uſing ſtimulants and bliſters to advantage, and for making exertions for intermiſſions, where ſpontaneous criſes are not to be expected. And though what CELSUS obſerves in fevers †, often happens in hot climates, that the acceſſions are ſo confounded, that neither their coming on, nor their duration, can be correctly aſcertained, yet it ſeldom happens in continued fevers, that one,

* Tetrab. 2, Serm. 1, Cap. 77. † Lib. III. Cap. 3.

one, and oftener two exacerbations, are not perceived within the nycthemeron.

Great caution is to be obſerved, when the yellowneſs that is critical, which is diſcovered in the eyes, on the third and fourth day, and a general ſuffuſion over the whole body, that the ſame treatment is not purſued, which is neceſſary, where that appearance is ſymptomatical.

Yet I do not ſee how TOWNE could ſay, "that the regular criſis of this fe-"ver generally diſcovers itſelf by a ſuf-"fuſion of *Bile* all over the ſurface of "the whole body about the third day *." Nor why HILLARY ſhould ſay, "this "total yellowneſs is ſo far from being an "encouraging prognoſtic, that it moſt "commonly, on the contrary, proves a "mortal ſymptom †." Oppoſite as theſe two opinions are, they are neither right, as they ſtand thus unqualified, for truth lies between them.

A yellow ſuffuſion may be either critical, or ſymptomatical. Critical, as

* Page 23. † Page 149.

TOWNE

TOWNE ſuppoſes, but it muſt be when there is a tranquil ceſſation, without languor, of all the other ſymptoms, with warm perſpiration:—and ſymptomatical, as HILLARY ſuppoſes, when accompanied with laſſitude, nauſea, or vomiting, colliquative ſweats, and ſunk pulſe.

The caſe, in my opinion, ſtands exactly thus, notwithſtanding HILLARY's idea that the yellowneſs cannot be critical, ſhould it appear before the eighth or ninth day. Perhaps HILLARY had in contemplation what has been often quoted, and very properly, in European climates, as a general axiom *.

But HILLARY muſt often have had opportunities, which perhaps he had forgotten, to know, that his contradiction of TOWNE was ill founded.

Great diſputes have ariſen in this part of the diſeaſe, concerning the application of bliſters. TOWNE is ſtrenuous in his

* Quibus per fibres, morbus regius, ante diem ſeptimum obortus fuerit, malum.

Aphor. 62, Sect. 4.

opinion

opinion for them; and HILLARY as ſtrenuous againſt them.

TOWNE ſays, "Bliſters are alſo of "great moment and efficacy at this juncture, and are therefore not to be forborne any longer. The bile being "now afloat, is to be diſcharged by every "out-let, *qua data porta ruit.* It is al-"moſt incredible what large quantities of "this juice may be evacuated by the ex-"ternal uſe of *Cantharides*: for their ſalts "entering now, and mixing with the "maſs of blood, diſſolve and attenuate "the viſcid particles, prevent the grow-"ing lentor, and by their cauſtic quality, "open the mouths of the veſſels for their "expulſion. Another great benefit we "gain from bliſters, is the tendency they "have to the bladder, by which means "another plentiful diſcharge of the re-"dundant bile is obtained; for by the præ-"cipitating, if I may uſe the expreſſion, "thoſe particles to the urinary organs, "they throw off abundance of them by "that ſecretion. I can affirm from ex-"perience, that when they have been

"applied

" applied before it is too late, a coma, " the deadly ſymptom of this diſtemper, " has very rarely enſued *."

Hillary ſays, the unreaſonable fondneſs which people in Barbadoes have for bliſters, gave him too often " an op- " portunity of ſeeing their bad effects, " eſpecially in this fever, where I have " obſerved that the coma, tremors, ſub- " ſultus tendium, the coldneſs of the " extreme parts, and the low pulſe, " (though this ſometimes has been ren- " dered a little quicker, but not more " full) have not only not been relieved " by their application, but have been in- " creaſed thereby; and the hæmorrhage " which uſually attends the fever, has " been haſtened on; or if come on be- " fore, it has been increaſed on their ap- " plication: and I have ſeen a veſicatory " which I ordered to be taken off, as I " uſually do as ſoon as I come, in this fe- " ver, that the part where it laid was " turned black, and perfectly ſphacelated;

* Page 46.

" and

"and if the ſpine, and ends of the ribs "had not hindered, a large ſquare paſ- "ſage into the thorax would have been "opened, if the patient had lived a few "hours after it: but he died two hours "after I came. And the reflection, that "I have never ordered any veſicatories to "be applied in this fever, and have al- "ways ſtrictly forbidden their application "in it, I muſt ſay, gives me great ſatiſ- "faction *."

It is hardly poſſible to conceive how theſe two opinions, like the former, ſo directly oppoſite, and yet both ſo ſyſtematically erroneous, ſhould have eſcaped two men who had many opportunities of deciding with more preciſion on the effects of bliſters: but falſe theory perſuaded one; and falſe theory deterred the other.

If bliſters had that effect on the body which either of theſe gentlemen aſſert, they

* Page 170.

would certainly be improper in this fever. Their "ſalts entering and mixing with "the maſs of blood, and diſſolving and "attenuating its viſcid particles," would be a bad argument for uſing them in this ſtate of the fever; nor would the quantity of bile evacuated by them, be of much ſignification, if there were no better reaſons. Neither do they "cauſe "the part on which they are laid to "ſphacelate and turn black, and open "paſſages into the thorax," which HILLARY ought to have known, was only an index of the general mortified condition of the patient's whole body, pointing directly to death; which bliſters could neither retard nor accelerate.

The people in the Weſt-Indies are, as HILLARY obſerves, remarkably fond of applying bliſters in every diſorder.

They are found to be a ſafe and powerful remedy. Natives, and long reſidents in the Weſt-Indies, are ſeldom diſturbed by inflammatory diſeaſes, and they

they can ſcarcely ever apply bliſters amiſs. They give a ſtimulus to the languid veſſels, and form a drain for the acrid ſerum of the blood, which often keep up diſorders from debility, obſtruction, and irritation.

If bleeding, purging, baths, and diaphoretics, do not remove the fever in its firſt ſtage:—

If purging, baths, diaphoretics, and bliſters, do not remove it in the ſecond ſtage:—

If the vomiting cannot be ſuppreſſed, and bark retained:—

The laſt ſtage of the diſeaſe appears with its direful vomiting; which at firſt has generally the appearance of the grounds of coffee; then that of a ſlate colour; and then dark, thick, and grumous. The interior ſurfaces of the body are all oozing out blood into their cavities. Every excretion is corrupted blood.

I have ſeen people recover after the vomiting has reſembled coffee grounds, when any purgative medicine, united with a decoction of bark, could be made to paſs downwards, that the unnatural actions of the ſtomach were reſpited; and the ſtate of that organ, and the bowels, ſo relieved, that bark might be taken with any effect, from the power of the internal abſorbents being reſtored, which had been ſubverted by inceſſant vomiting. For in this ſtate of the vomiting, the rupture of the interior veſſels is only partial, and the demolition of the ſtomach and inteſtinal tube only commencing; and though the proſpect is very gloomy, there are ſtill ſome rays of hope.

But when this ſtate has continued for many hours, and the internal hæmorrhage becomes general, the ſtomach and bowels have loſt all power of reſtricting the blood veſſels, the bond of union between the ſolids and fluids, is diſſolved, and the vital principle is too much ſunk ever to be raiſed. Then black, gangrenous,

nous, mortified blood, is discharged upwards and downwards, and there are no hopes of life *.

The application of bark and vinegar in baths, fomentations, and cataplasms; sinapisms, and acrid cataplasms to the feet; camphire, snake-root, and cordial antiseptics, have been sometimes of service, even here, as many practitioners have said; and therefore, though I am of a different opinion, they should not be omitted.

I should not have thought it necessary to mention even the name of *Opium* in this fever, had not HILLARY advised it, and others rashly followed his advice in giving it, to check the vomiting in the beginning of the disease.

* "Quibus per morbos acutos ...... bilis atra, aut "veluti sanguis niger subierit, ii postridie moriuntur."
HIPPOC. Aph. 23. Sect. 4.

In a fever ſo highly inflammatory, with the ſtomach in a conſtant ſtate of inflammation, and the contents of the whole alimentary canal ſo hot, and acrid, it muſt be, what I fear it often has been, a fatal medicine.

TRALLIAN indeed is of opinion, where there is great watchfulneſs in the Cauſus, that opiates ſhould be given; "Quippe "ſomnum inducunt, et febrium vehe- "mentiam ardoremque obtundunt." But our Cauſus admits of no ſuch remedy, as an antiemetic; and ſoporifics are injurious.

In regard to regimen, during the firſt three or four days, thin, ſoft, cooling drinks, emulſions, and chicken broth, beſides the medicines, will be as much as the ſtomach will be able to ſuſtain, even was any thing elſe neceſſary. After the criſis, or after the firſt ſtage of the diſeaſe, panada, gruel, and ſago are the moſt proper articles for nouriſhment; with the addition of a ſpoonful of Madeira wine, where the patient is weak, languid, and exhauſted.

exhaufted. Wine cherifhes the ftomach, and acts as a cordial, mixed with thefe nourifhments: but if it is given any other way, it affects the head, and heats the patient. Wine fhould be ufed in the fame manner in all fevers.

The laft patient I faw, in the laft ftage of the Yellow Fever, was Captain MAWHOOD of the 85th regiment, at *Port Royal* in *Jamaica*, on the 24th of September, 1780. It was on the fourth day of his illnefs; he had been in the ifland feven weeks.

I arrived at the lodgings of this much-efteemed young man, about four hours before his death. When I entered the room, he was vomiting a black, muddy cruor, and was bleeding at the nofe. A bloody ichor was oozing from the corners of his eyes, and from his mouth and gums. His face was befmeared with blood, and with the dulnefs of his eyes, it prefented a moft diftreffing contraft to his natural vifage. His abdomen was fwelled, and

 inflated

inflated prodigiously. His body was all over of a deep yellow, interspersed with livid spots. His hands and feet were of a livid hue. Every part of him was cold, except about his heart. He had a deep, strong hiccup, but neither delirium nor coma; and was, at my first seeing him, as I thought, in his perfect senses. He looked at the changed appearance of his skin, and expressed, though he could not speak, by his sad countenance, that he knew life was soon to yield up her citadel, now abandoning the rest of his body. Exhausted with vomiting, he at last was suffocated with the blood he was endeavouring to bring up, and expired.

ON

ON THE

TETANUS,

OR

LOCKED-JAW.

WHETHER the exceſs of credulity, or downright infidelity, be moſt derogatory from ſcience, is a queſtion in phyſic, difficult, I believe, for medical caſuiſts themſelves to determine.

Exempt from the prejudice of extremes, a prudent phyſician will take a middle ground, and arm himſelf with a certain portion of ſcepticiſm upon moſt occaſions:—and particularly in applying the theory and doctrines of thoſe who have furniſhed

furnished the world with histories of spasmodical affections. *Sic veris falsa remiscent.*

The Greek writers have distinguished general, or universal rigid spasm (σπασμὸς, *Convulsio, Contractio, Distentio Nervorum)* in which the muscles of the neck were affected, by the name of τέτανος, which was subdivided, according to the parts further affected, into ᾽οπισθότονος, and ἐμπροσθότονος. GALEN every where makes the same distinction *.

When the neck, body, arms and legs were straigh rigid, and inflexible, with the mouth fastened, that state was called a *Tetanos*.

When the neck and thorax were thrust forward, and the body curved and bent backward with the hands clinched, and the arms and legs rigid, contracted, and drawn backward, that was called an *Opisthotonos*.

* Introduct. seu Médic. Cap. 13, et in aliis locis.

When

When the head was bowed forward, and the chin fixed to the ſternum, with the thorax depreſſed, the ſpine of the neck and thorax gibbous, the hips turned outward, the hands clinched, and the legs extended, that was called an *Emproſthotonos*.

The general name, however, was *Tetanos*, which CELSUS calls *Rigor Nervorum*,* and ſubdivides it according to the Greeks†; we have adopted the word *Tetanus* from the Latin writers, in our language, but more commonly that of the *Locked-Jaw*.

All nations have preſerved the ancient diviſion of the *Tetanus* into three ſpecies; and theſe have been handed down from generation to generation, and admitted in the rank of diſeaſes, without any examination, or ſuſpicion that the ſubject was queſtionable.

* Lib. II. Cap. 1.

† Lib. IV. Cap. 3.

Not-

Notwithſtanding theſe diviſions, deſcriptive of three diſtinct ſpecies of original ſpaſm, I think, ſuppoſing the three affections really exiſted, that they ought not to be conſidered as ſeparate ſpecies, but as different degrees of univerſal Spaſm, or *Tetanus*;—the extreme degree of which conſtitutes the *Opiſthotonus*.

HILLARY reverſes the fact, when he ſays, "the Tetany may be eſteemed only "a greater and more univerſal extended "degree of the Opiſthotonos."

There can be no ſuch thing as what SYLVIUS calls *convulſio ſemi-univerſalis*, to which he attributes the Opiſthotonus, and Emproſthotonus *.

There are partial ſpaſms, and cramps, every perſon knows; and particular muſcles may be affected, as in the *Spaſmus Cynicus*, *Tortura*, *Riſus Sardonicus*, *Triſmus*, and *Strabiſmus*.

* Prax. Med. Lib. II. Cap. 3.

Hyſterical

Hyſterical people are ſubject to ſpaſms in every muſcle of the body. The mouth, as in the Locked-Jaw, is often affected: deglutition impeded; and a variety of fixed poſitions, and involuntary actions, are produced, whoſe deſcriptions are infinite.

WILLIS inſtances a curious caſe, in which every part of the lady's body was convulſed, or rendered ſtiff and rigid, by turns. Sometimes her head was turned to the right ſide, then to the left, then backwards, as in the Opiſthotonus, then forward, as in the Emproſthotonus. She was always relieved by the fumes of Tobacco, blown up her noſtrils; but the ſpaſms always returned in ſome place or other, ſoon after that remedy was deſiſted from *.

This is ſomething like what LIND relates to have happened, in a caſe which he calls an *Opiſthotonus*, at Haſlar Hoſpital. He ſays, "it was remarkable, that

* De Motu Muſculari.

"an

"an application of Opium and Camphire "to the feet, inſtantly removed the ſpaſm; "which, upon taking off the application, "immediately returned, with its former "violence. An effect which was ſeveral "times produced by the repeated appli- "cation of theſe medicines *."

Such a ſimple affection, or partial rigidity of the muſcles of the neck, was the caſe of a patient mentioned by FORRESTUS, which he calls an *Emproſthotonus*. For he ſays the woman "came to him" for advice; and as he gave her only an inſignificant ointment, to apply to the parts, and ſays the caſe did not prove fatal, it could not be a very ſerious diſorder †.

I believe there is no other *Emproſthotonus* than theſe kinds of partial nervous affections; and what has been defined as ſuch, as a general muſcular ſpaſmodic diſeaſe, in my opinion, never had exiſtence; for of nearly an hundred people that I have ſeen periſh by the *Tetanus*, from wounds and accidents in the Weſt-Indies, I never

* Page 128.

† Lib. X. Obſ. 113.

ſaw any thing like what is called an *Emproſthotonus.* I have alſo inquired among the oldeſt practitioners there, and no one ever ſaw it. Nor do I believe that any practical writer of reputation pretends to have ſeen it. But this evidence I know would not be ſufficient to diſprove the exiſtence of the diſeaſe, if it was poſſible it could exiſt, according to the laws of phyſiology.

It is ſingular enough that ETMULLER ſhould inſiſt that HIPPOCRATES means the *Emproſthotonus* *, in the 35th Aphoriſm of the 4th Section, where he ſays, "In a fever where there is a ſudden per-"verſion of the neck, with difficulty of "ſwallowing, without any tumor, it is "fatal."

Others inſiſt that the Emproſthotonus is meant where HIPPOCRATES ſpeaks of *Tetani* about the loins †: but that cannot be, becauſe HIPPOCRATES ſays, thoſe convulſions

* De Spirit. Animal. Vitioſo Motu, Cap. 9.

† Τέτανοι δὲ ὀσφύος, Lib. de Vict. Rat. in Morb. Acut.

vulſions proceeding from atrabilarious humours, cauſing obſtructions, are cured by bleeding. Nor does the ſubſequent paſſage confirm that to be his meaning there.*

He ſays, in one place, that there are two or three ſorts of *Tetani* †, but he deſcribes only the *Tetanus*, and *Opiſthotonus*; and in another place he ſays, that there are three ſorts of *Tetani* ‡, but here he is more explicit; and after deſcribing the *Tetanus* and *Opiſthotonus*, he ſays, the *other Tetanus* § is leſs fatal than the former: and that in this the whole body is convulſed, but that it ſometimes affects only ſome particular part: and that the patient walks about at firſt, then takes to his bed, and when the pains and ſpaſms abate, he riſes, and perhaps walks up and down for a few days, and is afterwards attacked with the ſame pains, and alſo with a difficulty in ſwallowing his

* Ὁκόταν δέ ἀπο τῶν τενόντων σφοδρῶς ἔμπροσθεν ἀντισπῶνται; &c.

† Τέτανοι δύο ἢ τρεῖς, Lib. de Dieb. Judicat.

‡ Τέτανοι τρεῖς, Lib. de Internis Affect.

§ Ἄλλος τέτανος.

 food,

food, and perhaps ſuffocation. But the methods uſed in the other *Tetani*, and a glyſter of cremor of boiled ptiſan and honey, ſpeedily cure this diſeaſe.

It is unneceſſary to give a minute detail of the ſymptoms of the *Tetanus*; the direful train of evils already mentioned ſufficiently characterize it, and are well known to practitioners.

There have been many incorrect, deficient, and ſuperfluous accounts of this diſeaſe; but to the honour of the great father of phyſic, there has never been one ſo diſtinct and plain, as what he has given us, in his third book *De Morbis*; and alſo in his book *De Diebus Judicatoriis*, which he repeats in his book *De Internis Affectionibus*.

Many writers have given deſcriptions that have more the air of curioſity than of ſcience. They have drawn the diſeaſe with ſome minute lines which ſeldom or never appear, and have omitted ſome of its real pathognomonical ſtrong linea-

 ments,

ments. That is not the caſe with HIPPOCRATES.

It ſeems to me, that CHALMERS, of South Carolina, had never read any thing more of what HIPPOCRATES ſays of this diſeaſe, than the three caſes of *Opiſthotonus*, in the fifth book of Epidemics. Otherwiſe it is impoſſible he ſhould have ſaid, that there has not been "any thing like "a full deſcription given of the diſeaſe, "by any ancient or modern author;" and "that the few ſymptoms HIPPOCRATES "recounts, do not ſhew themſelves with "us*."

So far is this remark from being juſt, that I never ſaw the diſeaſe without every ſymptom HIPPOCRATES recounts in the third book *de Morbis*: nay, ſuch is his accuracy and diſcrimination, that no one but himſelf, among the ancients, has noticed the principal pathognomonic, which, beſides the bending of the body, diſtinguiſhes the *Opiſthotonus* from the *Tetanus*:

* Medical Obſervations and Enquiries, Vol. I. p. 89.

and

and the moderns who have noticed it, have not made the diſtinction. This is, —on the return of the ſpaſm, after a temporary remiſſion, in the *Opiſthotonus*, the patient is ſo ſtrongly convulſed, by the ſudden contraction of all the muſcles at once, that he ſprings up in the bed, and without great care will be forced intirely out of it, on the floor.

On viſiting people in this diſorder, I have often found them upon the ground, when their attendants have neglected them.

The leaſt touch of the body, or any ſudden emotion, or noiſe, or ſurpriſe, will bring on the ſpaſms when they have remitted. Once, as I entered the hut of a man, who had got up in one of theſe remiſſions, in an *Opiſthotonus*, and was ſtanding on the floor, leaning againſt his bed, he was ſuddenly ſeized with a violent contraction of all the muſcles, that curved his body like a bow, and he ſprung up from the ground, and pitched backwards, with his head foremoſt, nearly three yards

 from

from the place where he ſtood, among ſome earthen pots that were in a corner. By the fall he cut his head very much, and divided the temporal artery: he died within two hours. It was the third day of the diſeaſe; the cauſe of which was not aſcertained.

ARETÆUS and CÆLIUS AURELIANUS, who have given the moſt minute deſcriptions of the diſeaſe, have both omitted this circumſtance:—and CÆLIUS AURELIANUS only quotes HIPPOCRATES for the clinching of the hands in the *Opiſthotonus*, as if he had never ſeen it himſelf. Though this, in which HIPPOCRATES ſays, the thumb is often locked in the hand by the fingers, is another almoſt invariable ſign in the *Opiſthotonus*, yet CHALMERS ſays, "the wriſts and fingers ſeem not to "be affected."

There are here, as in other diſeaſes, different ſymptoms in different habits. But when the patient is not plethoric, nor of an inflammatory tendency, though breath-

breathing is interrupted during the ſpaſms, the pulſe, in general, is nearly as regular as in health: and the patient remains in his perfect ſenſes to the laſt; when he is cut off, by a great convulſion, which at once ſubverts both the vital and animal functions.

The reaſons for my aſſerting that the *Opiſthotonus* is the extreme degree of *Tetanus*, are founded on the ſame principles, which ſupport my opinion, that there is no ſuch diſeaſe as an *Emproſthotonus*, as a muſcular and peculiar degree of univerſal ſpaſm.

When the fibres of all the muſcles of the body are put to their extremeſt exertion, the cervical, dorſal, and poſterior muſcles, being more in quantity, have too much power to be reſiſted by the anterior muſcles, and the body is bent backwards; as the flexors of the hands are too powerful for the extenſors, and therefore the hand is clinched together.

All the anterior muſcles are exerted to their utmoſt in the *Opiſthotonus*; but thoſe that make the moſt reſiſtance againſt their poſterior antagoniſts, are the *Maſtoidei* of the neck, and the *Recti* of the abdomen. Theſe are ſwelled up, and are as hard to the feel, and as rigid, as pieces of wood.

This refutes SYLVIUS's notion of *ſemi-univerſal* ſpaſm, as far as relates to the anterior and poſterior parts of the body. For if the nerves endue the muſcles with energy, the anterior muſcles never can be univerſally affected without the poſterior muſcles. It is otherwiſe in reſpect to the lateral muſcles; the ſides may be affected ſeparately, from the diſtribution of the nerves, as we obſerve in the *Hemiplegia*. MORGAGNI inſtances a caſe of *Tetanus*, which on the morning of the patient's death, the fifth day, ceaſed from being univerſal, and the ſpaſms and rigidity ſeized only one ſide of him. He mentions this, becauſe MERCURIALIS aſſerts, that only the three ſpecies of *Tetanus* before-mentioned ever happen *.

* Letter X. Article 2.

All writers mention the pathognomonic pain, and ſpaſm under the ſternum; and HIPPOCRATES himſelf mentions violent pains, in general, which attend this diſeaſe. It ſeems conformable to reaſon, that it ſhould never be otherwiſe; but it is otherwiſe frequently. I have known people in the *Tetanus* with the ſweat running off them from the agonizing pulling of the muſcles, who have neverthelesſs told me, though they felt a diſtreſs, which they could not deſcribe, yet they could not ſay it was actual pain. Partial ſpaſm, every perſon who has been waked in the night with the cramp in the calf of the leg, knows to be ſevere pain; but general ſpaſm is not ſo always.

It is evident what dependance the muſcles have on the nerves, being deſtitute of action, deprived of them. But, perhaps HALLER's opinion is better ſupported in this diſeaſe, than in any inſtance he has given: and that there are great miſtakes concerning the ſeat, and effects of ſenſibility, and irritability.

HALLER places ſenſibility in nervous, and irritability in muſcular, parts.

I have loſt many patients in the *Locked-Jaw* after amputations; and never found leaving out the nerves, or whether ligatures were made, or not, cauſed the ſmalleſt difference in the event; nor were any ſecurity againſt the *Locked-Jaw*, nor diminiſhed the ſymptomatic fever.

How far the ſenſibility of the nerves, or the irritability of the muſcles are concerned in the *Tetanus*, or how the muſcles ſhould act in ſympathy, without the nerves appearing to be any way affected, is, I believe, in as much obſcurity as GALEN's "principalis animæ vis."

The *Locked-Jaw* appears to be a diſeaſe intirely of irritability. Negroes, who are moſt ſubject to it, whatever the cauſe may be, are void of ſenſibility to a ſurpriſing degree. They are not ſubject to nervous diſeaſes. They ſleep ſound in every diſeaſe; nor does any mental diſturbance ever keep them awake. They bear chirurgical operations much better than white people: and what would be the cauſe

cause of insupportable pain to a white man, a Negro would almost disregard.

Susceptibility of the *Tetanus* does not depend on age, nor sex; neither is it confined to the human species. Every species of animal is subject to it. I have seen many horses die of it. It arises in animals from many of the same causes that produce it in human beings.

Of the obvious causes of the *Tetanus*, in the human race, bruizes, wounds, particularly of the toes and fingers, fractures, dislocations, miscarriage, worms, amputations, trepanning, obstructed perspiration, and sleeping in wet clothes, or in the cold night air, are the principal.

Painful injuries are not so often the cause of the *Tetanus*, as those which are more trivial. I have known many instances where it has been caused by a slight lacerated wound on a finger, or toe; but never one from the severest flogging, in military punishment. No pain, however excruciating, excited on the surface of the body, from the great sensibility of the

ſkin, is capable of producing it. I have ſeen it cauſed by muſcular irritation, where no conſiderable branch of a nerve has been near the part.

HIPPOCRATES ſays, all ſpaſms are cauſed either by repletion, or inanition *.

As to the cure of the different degrees of *Tetanus*, making allowance for habit, age, and conſtitution, they are, as CELSUS obſerves, all to be treated in the ſame manner. And this treatment ſtands juſt where it did in the time of HIPPOCRATES. All that has been written about it ſince, amounts to nothing but unavailing words: and thoſe who fancy they have diſcovered a better method of treating this diſeaſe than may be collected from HIPPOCRATES, ARETÆUS, CELSUS, and ÆGINETA have deceived themſelves, and all who have believed in them.

If it be urged that the application of mercurial frictions, is an invention of the moderns in this diſeaſe, I anſwer,

* Aphoriſm 39, Sect. 6.

it

it is my opinion, that mercury uſed in the *Tetanus* has killed more people than it has cured. And further, that I ſuſpect, thoſe who have recovered when this remedy has been uſed, would have recovered without it.

HIPPOCRATES ſays, that diſeaſes from repletion muſt be cured by evacuations; and diſeaſes from inanition, by repletion *.

GALEN ſays, that ſpaſms from inanition are incurable: but when they ariſe from plethora, and inflammation, they are cured by evacuations †. In other reſpects he mentions nothing of conſequence, beſides the practice of HIPPOCRATES ‡.

All the patients HIPPOCRATES appears to have had under his care in the *Opiſthotonus* from wounds, died. And ſo, I believe, have all the patients that every body elſe have had under their care, when the diſeaſe was complete, and cauſed by a wound.

* Aph. 22, Sect. 2.

† Methodi Medendi, Lib. XII. Cap. 8, et de Tremore, Palpitatione, Convulſione et Rigore, Cap. 8.

‡ Introduct. ſeu Medic. Cap. 13.

The

The four caſes of *Opiſthotonus* which HIPPOCRATES relates in his fifth and ſeventh Books of Epidemics, were from external injuries; one was from a ſlight wound below the neck behind; this patient died on the ſecond day of the diſeaſe. Another was from a contuſion and fracture of the fore-finger, and its metacarpal bone; inflammation, fever, and mortification came on; purging abated ſome of the ſymptoms, and part of the finger fell off; after the ſeventh day the wound diſcharged a thin acrid ſanies; the patient was ſeized on the tenth day, and ſweated much, and died on the third day of the diſeaſe. Another was from a luxation, or contuſion, of his great toe; this patient died on the third day of the diſeaſe*. The other was from applying ſome corroding medicine to a clean ulcer, on the leg, near the ancle, by the tendon; the day is not mentioned when this patient died.

Indeed it is one of his Aphoriſms, that

* I have ſaid *luxation* or *contuſion*, becauſe this caſe is twice related, with ſome variation. In the fifth book the text is ϛτρέμμα, and in the ſeventh book it is τύμμα.

Spaſm

Spasm happening after a wound is mortal *; and that those who are seized with a *Tetanus* die within four days; or if they survive the fourth day they recover †. CELSUS is of the same opinion ‡. But HIPPOCRATES, in another place, extends the period of danger to the third, fifth, seventh, or fourteenth day §.

Many of the wounded men in the French squadrons, last war, in the East and West-Indies, died of the *Locked-Jaw*. It was remarked by the surgeons in *M. Dache*'s fleet, that almost all the wounded men who were sent on shore, after the action, died of the *Locked-Jaw*, and but very few of those who remained on board the ships were attacked by it.

I never found, after a wound, or a chirurgical operation, in the West-Indies, that there was any time, until the patient was intirely well, exempted him from the insult of this disease.

In 1772 I trepanned the skull of a

* Aph. 2, Sect. 5. † Aph. 6, Sect. 5.

‡ Lib. IV. Cap. 3. § De Morbis, Lib. III.

young

young man, of the name of *Sheppard*, for a fracture, at Hope Estate, near Kingston in Jamaica; the wound went on well, and every symptom was favourable. He was seized with a *Tetanus* thirty days after the operation, and died on the third day.

I never saved one patient who had a complete *Tetanus* after an operation: but have prevented many, I believe, by giving bark, as soon as possible, after every operation, with anodynes every night, and attending to the state of the bowels. Bleeding often, purging occasionally, and an extremely low diet, is the best security in fractured skulls, and injuries of the head. *Sheppard*'s Tetanus was occasioned by his imprudence. He walked out of the house, ate some salted herring, and drank some punch, on the day previous to his being attacked.

On the 12th of March, 1779, I was called to a man named *Mooshel*, at *Daniel Gully*'s, a shipwright, in Kingston, whose skull was fractured by a brick falling on

his

his head. The ſcalp was not lacerated, but there was, beſides a ſtupor and vomiting, a ſoftneſs and ſwelling at the part, that determined me to expoſe the cranium to ſight; and to avoid, as I hoped, the error of the good, as well as great HIPPOCRATES *;—for the confeſſion of which miſtake, his candour has been ſo much admired by all ſucceeding ages †. I made a ſection of conſiderable extent, to embrace, as I thought, all the injury; that I might not be deceived by the ſutures, nor obliged to make a ſecond cutting. But to my great ſurpriſe, on removing what I had deſigned, I diſcovered ſuch a fracture as I never ſaw before, nor ſince. I took away eight pieces of broken bone, one of which was driven

* De Morb. Vulg. Lib. V. 28.

† "A futuris ſe deceptum eſſe HIPPOCRATES memoriæ tradidit, more ſcilicet magnorum virorum, et fiduciam magnarum rerum habentium. Nam levia ingenia, quia nihil habent, nihil ſibi detrahunt. Magno ingenio, multaque nihilominus habituro, convenit etiam ſimplex veri erroris confeſſio: præcipueque in eo miniſterio, quod utilitatis cauſa poſteris traditur; ne qui decipiantur eadem ratione, qua quis ante deceptus eſt."

CELSUS, Lib. VIII. Cap. 4.

two

two inches into the brain. A dram weight of the brain came out with the piece of bone, and a portion of the dura mater. The fracture was round the junction of the ſagittal and coronal ſutures, and took in part of the frontal, and both parietal bones. Pieces of each of theſe bones were taken away.

On the 15th I traced a long crack croſs the bone, from the ſagittal ſuture, and found it neceſſary to extend the removal of the ſcalp, by another ſection, and to apply the trepan at the extremity of the fiſſure, to elevate the depreſſion, and remove what bone was required, that the extent of the internal injury might be aſcertained, and the brain relieved. I took away from the upper angle of the left parietal bone only, as much, when put to the former pieces of the ſame bone, as made nearly a triangle, each ſide of which meaſured about four inches.

The cauſe of this extraordinary miſchief, was not from the violence by which the brick fell, for it fell but a little diſtance

tance from his head:—but it was owing to the extraordinary thinneſs of the ſkull bone, which ſcarcely exceeded the thickneſs of a line. The union of the tables was ſuch, that the diploe was ſcarcely diſcernible. Several medical people, to whom I ſhewed the bones, and to whom this remarkable caſe was known, confeſſed they had never ſeen any thing like the thinneſs of the bone, except in children.

The operation, from relieving the brain, and from the great loſs of blood, carried off the ſtupor and vomiting; which was kept under, and other untoward ſymptoms prevented, by glyſters, and purging the patient often. He was not plethoric, and from having loſt ſo much blood at firſt, I did not find it neceſſary to bleed him afterwards, in the courſe of the cure.

A few days after the operation he became Tetanic. I deſpaired of my patient, and believing no medicine could ſave him, I gave him none, except twenty-five drops of laudanum every

 night.

night. This alarming appearance went off of itſelf in a few days, and a hemiplegia ſucceeded, which continued the ſame, through the whole of the cure; which was five months in completing. I ſaw the man ſome years afterwards, and he had regained much of the uſe of his paralytic ſide. I attribute this man's eſcape to the effuſion of blood in the operation; and to the extraordinary diligence and tenderneſs with which my pupil, Mr. LEWIS HALLAM, attended him afterwards, and dreſſed the wound.

Though I have but little expectation that there ever will be diſcovered any ſpecifical, and certain method of curing the *Tetanus*, I do not pretend to ſay a *Tetanus* will not yield to ſome kind of treatment. A ſlight one, from cold, and obſtructed perſpiration, will. Sometimes even to a warm bath, and electricity: and often to diaphoretics with anodynes. And when, as HIPPOCRATES ſays, the patient ſurvives the fourth, fifth, ſeventh, or fourteenth day, the diſeaſe, I believe, is almoſt always curable;—and I wonder writers ſhould lay ſo much ſtreſs, and think

think ſo much, of having cured a patient who has laboured under this diſeaſe for a fortnight, three weeks, or a month; knowing, as every perſon muſt who has practiſed long in the Weſt-Indies, that a mortal *Tetanus* is ſeldom or never a tedious one; and believing, that any *Tetanus* exceeding the time before-mentioned, frequently, will abate gradually, without any medicine at all.

In 1776, I cured a *Captain Thompſon* (from America), in Kingſton, of a *Tetanus*, only by putting him into a warm bath, three times a day, and giving him ſmall doſes (for that part of the world) of laudanum, and antimonial wine. This medicine kept up a great perſpiration, cauſed by the bath; which I judged to be the moſt proper method of treating a *Tetanus*, as his was, from obſtructed perſpiration, from the night air. But he had the diſeaſe ten days. The next patient I treated in the ſame manner died.

The ſame apparent ſucceſs and diſappointment have been experienced from great quantities of Bark and Wine: Theri-

aca and Wine: Mercurial Frictions: Musk, Camphire, and Assafœtida.—Of Saccharum Saturni, which I have heard commended in this disease, I can only say, that I have never known it produce either good or harm. A man, to my knowledge, took six drams of the Sugar of Lead in three days, in a *Locked-Jaw*, without producing any effect whatever.

I have frequently known the same thing from opium. The stomach will sometimes bear a dram of opium every two or three hours, for three days together, without procuring sleep, and without the diminution, and often without the alteration, of any one symptom. But here I must remark, that I never found any use from a large quantity of opium, where a small quantity had not first produced some apparently good effect.

Practitioners, in countries where the *Locked-Jaw* is a common disease, have seldom found the same remedy to succeed twice, successively. Chagrined with continual disappointment, they fly to every thing

thing that offers but the ſmalleſt hope, and are induced to try the powers of medicine, in doſes, that might ſurpriſe people practiſing in temperate climes, where this ſtrong rigidity of the muſcles, which, if bent by force, would cauſe inſtant death, is ſeldom ſeen.

This has been done ſo often, with ſuch extent of poſological experience, that they read without improvement, thoſe inſtructions that are given for the treatment of the *Tetanus*, which are fabricated in countries where the diſeaſe is almoſt unknown.

Lind ſays, "In a caſe of *Opiſthotonus* "at Haſlar Hoſpital, the Extractum "Thebaicum was given, to the quantity "of a ſcruple, in leſs than twenty-four "hours;" and that "opium ſhould be "given at the ſame time (mercurial fric- "tion and the warm bath are uſed), to pro- "cure ſleep *."—The firſt remark would have been more coincident with the practice of thoſe who ſee the diſeaſe almoſt

* Page 288, 289.

every day, if the quantity of opium had been an ounce, inftead of a fcruple; and the latter, though the fame error is countenanced by ÆGINETA, with their obfervations, if he had faid, that no quantity of opium whatever will, with any certainty, procure fleep in an *Opifthotonus*:—and that there are many doubts whether opium, given alone, has ever been of any utility at all.

Prevention is better than cure. And if, where the cure of difeafes is probable, and even certain, this precept is never violated without forrow, the mifery of neglecting it here, falls fo heavy on the unhappy patient, that no fkill nor attention afterwards, will be found equal to overtake, and make atonement for the omiffion.

When a wound or contufion has been received, in the fingers or toes in particular, or when an amputation, or any other chirurgical operation has been performed, the fymptomatic fever, and irritation of the wound, are to be removed as foon as poffible, by aperients, or glyfters,

ters, with cooling and diluting medicines, anodynes, and a careful regimen. The patient at the ſame time is to be kept in a cool room; and the wound to be expeditiouſly brought to a ſtate of good digeſtion.

If the wound be a ſmall one, a poultice, frequently renewed, over any ſoft and light dreſſing, is generally the beſt application, at firſt. If it be a large one, or from an amputation, the beſt dreſſing, until the ſwelling and inflammation are gone, is olive oil on pledgets of lint, with a warm digeſtive plaſter on tow, over all. Warm fomentations are to be uſed before the dreſſings; which, after the firſt dreſſing, muſt never be ſeldomer than once, and very often twice a day: and the wound is to be as little as poſſible expoſed to the air.

When the ſymptomatic fever has abated, bark is to be immediately given, and often repeated, and an anodyne every night. And let the appearance of the wound be what it may, bark ſhould always be given occaſionally until the patient is well; for I have often known, when the wound has been nearly healed, where

the dischage has been always good, and no symptom of irritation appearing, that the *Locked-Jaw* has suddenly, and unexpectedly, come on, and destroyed the patient.

If the wound be in the hand or foot, from a splinter of wood, or a thorn, or a nail, or a piece of glass, a hot steam should be applied to the part, at each dressing, which should be a poultice. Dilatation is sometimes necessary, where, in a deep wound, with a small orifice, there is much heat, and pain, and no disposition toward digestion;—or making a transverse incision down through a wound, where it is jagged, and the fibres and vessels partially divided;—or if on a finger or a toe, amputating the part intirely on the first appearance of any Tetanic symptom:—and if a thin acrid sanies is discharged, warm oil of turpentine, and hot digestives should be applied: and bark be given in large doses, often, with wine, where the constitution is sunk, and the patient weak, or aged. These are the best prophylactics against the *Locked-Jaw*. Opiates externally applied, are not of the smallest

utility,

utility, either in the prevention, or cure of a *Tetanus*.

Hippocrates ſays, that a fever coming on where there is a *Spaſm* or *Tetanus*, removes the diſeaſe *; and practice confirms this to be true; and I have obſerved that a heat in the ſkin is always a favourable ſign.

Hippocrates, in order to raiſe an artificial fever, adviſes, pouring a great quantity of cold water upon the patient, and that, he ſays, recalls the native heat, and heat cures the diſeaſe. The patient is to be covered lightly afterwards, and be kept cool, as he adviſes in another place, where this proceſs is again mentioned †.

But he gives a judicious caution, and Galen, in his comment upon the paſſage, does the ſame; that this practice muſt not be uſed but in Summer time (this applies particularly to European climates); nor unleſs the patient be young, and of a full habit of body, and without an ulcer ‡.

* Aphor. 57, Sect. 4. † De Morbis, Lib. III.
‡ Aphor. 21, Sect, 5.

For

For it is evident, if a patient ſhould be old, infirm, and weak, that applying cold water, would rather extinguiſh than increaſe the native heat.

He adviſes alſo, as a remedy, *Pepper* and *Black Hellebore*, to be taken in hot fat fowl broth; and ſtrong ſternutatories to be uſed; and the patient to be fomented; or warm and pinguious liquids applied in bladders all over his body, and he is to be well rubbed with a great quantity of warm oil, particularly on the parts moſt affected *.

He recommends, as another remedy, that warm fomentations and unctuous frictions be made, at ſome little diſtance from a fire; and warm things to be applied afterwards; and a fotus made of wormwood, bay-leaves, henbane ſeed, and frankincenſe, macerated together in white wine, in an earthen pot, with an equal quantity of oil to be put to it, which being made hot, the head and body is to be

* De Morbis, Lib. III.

well

well anointed with it. Afterwards the patient is to be covered, that he may ſweat profuſely: and to drink, if he can be made to ſwallow, otherwiſe it is to be put into his noſtrils, a mixture of warm honey and water; and alſo plentifully of good white wine. Theſe things are to be repeated every day *.

He does not mention cupping, but ARETÆUS, CELSUS, AETIUS, ÆGINETA, and moſt other ancient writers, as well as the Arabians, adviſe it; ſome with ſcarifications, and ſome without; upon the neck, ſpine, breaſt, and parts moſt affected. P. ÆGINETA adviſes the parts to be covered with wool, wetted with oil; and where the diſeaſe has been of long duration, to put the patient into a tub of oil twice a day, but he is not to remain long in it, as it will weaken him.

The remedy that has been found during the laſt fifty years, between the tropics, to ſucceed ofteneſt in this deplorable diſeaſe, is

* De Intern. Affection.

the

the cold water procefs of HIPPOCRATES. But this remedy has been fo imprudently and indifcriminately ufed at Cayanne, Martinique, Hyfpaniola, and in the Englifh Colonies, that it has fallen into difrepute, as many have been killed fuddenly by it. I fuppofe the want of fuccefs, attending the improper application of cold water, made PAUL ÆGINETA fo illiberal againft this doctrine of HIPPOCRATES *.

Yet we find phyficians in the beginning of the fifteenth century following this doctrine, and curing their patients by it.

VALESCUS DE TARANTA fays, he cured two men of the *Tetanus* in the following manner:—The patient was held upright by four men, and had twenty large pitchers of cold water poured on him, down his neck and body; he was then imme-

* "At vero frigidæ affufionem (velut HIPPOCRATES "dicit) quum maxime temeraria fit, et propterea à "pofterioribus damnata, etiam nos reprobamus." PAUL. ÆGINET. De Re Medica, Lib. III. Cap. 20.

diately

diately placed before a fire, and an hour and half afterwards, his neck, back, legs, and arms were well rubbed with the *Unguent. Dialtheæ, Martiati, et Agrippæ, et Ol. Caſtorei.*—He gave him nothing internally but chicken broth *.

From much unſucceſsful practice, and often reflecting on this HIPPOCRATIC doctrine, and GALEN'S judicious, and PAULUS'S injudicious comment on it, I diſcovered two modes of applying cold water equally advantageous, though the ends to be obtained are widely different; and alſo where the dangers of this *anceps auxilium* lie, and how they are to be avoided.

The firſt is,—ſuppoſing the patient a proper ſubject, to plunge him into the ſea, or into a river, or into a large tub of water, where he is to remain for a few minutes, keeping his head carefully ſupported, that he may not be ſuffocated in ſtruggling from the ſpaſms. He is then to be taken out, after having fatigued him-

* Lib. I. Cap. 21.

ſelf a little, and to be wiped dry, and put into a warm bed, and if a warm ſweat breaks out, it is to be promoted by Antimonial Wine and Laudanum; diluting as much as poſſible with warm chicken broth. But if a warm ſweat is not raiſed by the firſt immerſion, a ſecond is to be made two hours afterwards, and if that does not produce the effect, ſweating is to be no further urged; nor is a ſweat to be continued, where it does not relieve; nor is a ſecond immerſion to be made, when the patient's ſkin is cold after the firſt; and if his ſkin is hot without ſweating, recourſe muſt be had to the ſecond proceſs.

The ſecond is,—to uſe the cold water immerſion as before, or to place the patient naked under a pump; or in a current of water; where he is to have all the force of the water directed on his neck, back, and body, for a few minutes; or to lay him on a floor, where, from two, to eight or ten pailfuls of the coldeſt water are to be thrown, one after another, ſuddenly on him.— After either of theſe applications of water, he is to be wiped dry, and to be wrapped

 round

round with a warm ſheet, without any other covering, and to be put into a moderately cool room. This operation is to be repeated every three or four hours, while it continues to moderate the ſpaſms, or to raiſe, and keep up an heat on the ſurface of the body;—the heat is to be promoted with wine, volatiles, nervines, antiſpaſmodics, and cordials. But this proceſs is not to be repeated longer than the ſkin continues ſufficiently warm; for if the cold ſweats incident to the *Tetanus* continue, or increaſe, the patient will be deſtroyed by being expoſed to the cold after the water. But the medicines are to be continued, and bark is alſo to be given. Bark is in any caſe always to be given, on the decline of the ſpaſms. And here another caution is likewiſe neceſſary, which is, if a warm and profuſe ſweat ſhould break out, at any time, the affuſion of water muſt not be further repeated, becauſe it will check the ſweat, and deſtroy the patient; which, if encouraged, as in the firſt proceſs, will cure him.

Some ſurgeons, in the French Colonies, im-

immerge the patient in a cold bath by ſurpriſe, and there let him ſtruggle until he has nearly exhauſted himſelf, which is frequently attended with ſucceſs. Others make deep ſcarifications, or cauteriſe the neck and back, which, with glyſters, emetics, purgatives, cordials, and diaphoretics, they ſay, ſometimes ſucceed.

Desportes ſays, he cured a Negro woman, by making a ſeton in her neck, with an hot needle. But there are ſo many cures related by different writers, which have been performed, by trivial means, that one cannot conclude the diſeaſe to be otherwiſe than ſpurious.

Bontius and Piso have not mentioned any thing to be relied on in this diſeaſe; the former purſued the old practice of dry cupping the ſpine, ſhoulders, and breaſt; anointing with warm oils, glyſters, baths, ſal prunellæ, and opiates *; and the latter depended on bleeding, acrid glyſters, ſudorifics, baths, fumigations, frictions, anointing the ſpine with oils, and the juice of tobacco, and covering the patient, to promote ſweating †.

* De Spaſmo.

† De Spaſmo.

The

The Spaniſh ſurgeons in the Colonies bleed their patients, when plethoric, in both arms and legs; then vomit them, and afterwards give them theriaca in wine. The next day they make ſcarifications down from the head to the legs, in the poſterior part of the body; and irritate the parts every two hours, with roaſted *Coratoe*, or *American Aloe*, which they peel, that the juice may come out freely, and then rub the ſcarified parts with it.

The negroes generally apply frictions of warm olive oil, caſtor oil, rum and ſoap, oil of amber, &c. with their hands heated over ſome coals; and then cover the patient, and ſweat him. They are encouraged in this method, by the eaſe that is ſometimes produced while they apply their frictions, which is done with ſome violence; but the ſpaſms ſoon return, and they find their labour is in vain. They alſo give internally ſtrong Vervain Tea, or the juice of the herb, and other inefficacious vegetable drinks.

HILLARY's idea of the intentions of cure in this diſeaſe, was to "remove the "cauſe, and then the effects*." In this no perſon, I believe, will differ from HILLARY. DE HAEN had much the ſame ſentiments.—But how are theſe intentions to be anſwered†?

It is a great misfortune that we know ſo little of this diſeaſe, more than its effects, that a complete rationale, hitherto

* "Firſt, to remove and take away the irritating "cauſe which affects the Nerves; and then to diminiſh "and take off the ſtimulation, and irritation of the "Nerves. And, ſecondly, to relax the rigid tenſeneſs "and contraction of the Nerves, Tendons, and Muſ-"cles, of the parts affected." Page 231.

† In 1777, a very induſtrious writer at *Vienna*, collected what had been written on the *Tetanus*, and intitled his work "*Commentarius de Tetano*, plus quam du-"centis clariſſimorum medicorum obſervationibus, nec "non omnibus hactenus cognitis adverſus *Tetanum* re-"mediis inſtructus."—TRNKA.—But the author left the ſubject where he found it. He adopts the opinion that AIMAR, a French ſurgeon, firſt diſcovered the uſe of Mercurial Frictions, by accident, in the Locked Jaw.

unattempted,

unattempted, cannot be eſtabliſhed for the treatment of it. There is no diſeaſe in which the ancients differ ſo much as in this. Nothing can exceed the contradiction that is found between HIPPOCRATES and ÆGINETA: ARETÆUS and AETIUS. Nor is there any diſeaſe where the moderns have added ſo little, to the little the ancients have left them. Nothing can be collected, conſiſtent with rational theory, from all the practical remarks that have appeared. Mankind nevertheleſs have been benefited by many publications. The good reſulting from the occurrences of unſucceſsful practice, teaches what ſhould be avoided, if it cannot what ſhould be embraced.

But it is a dreadful reflection on the ſtate of a profeſſion, that ingenuity and plauſibility, without the ſmalleſt pretence from practice and obſervation, ſhall erect doctrines on the ſanction of its name, and intrude on the world their inſubſtantial conjectures, and betray the

inexperienced to a reliance on their authority. Uſeful means are thus often neglected, and the life of a fellow-creature is ſacrificed on the barbarous altars of deluſive ſpeculation.

In the courſe of the various books I have read on this ſubject, I cannot omit mentioning one publiſhed laſt year at Paris. It is intitled *Projet d'Inſtruction ſur une Maladie Convulſive, fréquente dans les Colonies de l'Amerique, connue ſous le nom de* TETANOS, *demandè par le Miniſtre de la Marine, à la Société Royale de la Médicine.*

I ſhall ſelect but one paſſage from this performance, which will be ſufficient to ſhew how far the author's knowledge was the reſult of practice and obſervation, in thoſe parts of the world, where the diſeaſe he treats of makes its ravages.

CULLEN ſays, in his Firſt Lines, Vol. III. page 173, "I have been further in-
"formed,

"formed, that the *Tetanus*, in all its "different degrees, has been cured by "giving internally the *Pisselæum Barba-* "*dense*, or, as it is vulgarly called, *Barba-* "*does Tar*. I think it proper to take "notice of this, here, although I am "not exactly informed what quantities "of this medicine are to be given, or in "what circumstances of the disease it is "most properly to be employed."

The French author, in consequence of this, says, page 93, "Nous apprenons "encore de M. CULLEN, qu'on a em- "ployé contre cette maladie *une Plante**

 "qui

* This "*Plant*," as the learned author calls it, and which, he says, "grows in Barbadoes, and some other "American Islands, and is distinguished by *Botanists* "under the name of *Pisselæum Barbadense*," is an Oily, Bituminous Fluid, issuing from some hills in the island of *Barbadoes*. It is, in general, of a dirty black colour, inclining to a green. The method of procuring it is to dig an hole, or trench, in, or very near the place where it oozes out of the earth: this, by degrees, fills with water, having a thick film, or cream, of this liquid bitumen swimming upon

" qui croît dans les Barbades & dans
" quelques autres Iles de l'Amérique, &
" qui est indiquée par *les Botanistes*, sous
" le nom de *Pisselæum Barbadense*: on as-
" sure que son usage intérieur a suffi pour
" opérer quelques guérisons; mais *le*
" *Practicien*, d'après lequel nous en par-
" lons, ne connoît ces succés que par le
" rapport qui lui en a été fait; *il ignore*
" *la dose & les préparations*, de ce remède,
" ainsi que *les circonstances de la maladie*
" où il faut l'employer: aussi suspend-il
" son jugement. Nous ne pouvons *qu'i-*
" *miter sa prudence*, & attendre que l'ex-
" périence nous ait donné à ce sujet des
" connoissances ultérieures & certaines."

If after such respectable information, I may presume to offer mine, it is, that *Barbadoes Tar* produces no benefit whatever in the *Tetanus*. And further, that even externally applied, the proper way of using it, it is of no service. It is sometimes serviceable used in embroca-

upon the surface, from whence it is skimmed off, and preserved in earthen jars, or other vessels.

tions,

tions, in old ſpaſmodic contractions, and pains in the joints.

That *Barbadoes Tar* ought to be uſeful in the *Tetanus*, is, in theory, reaſonable enough; and ſo ought Muſk, Caſtor, Camphire, and Aſſafætida, "quæ vicino "malo ſæpe ſuccurrerint;" but in practice they are not, and are as little to be depended on alone, as *Arnicæ Flores* *, *Phoſphorus Urinæ* †, *Fimus Equinus* ‡, or *Goats Urine and Water*, the vaunted remedy of *Marcellus* ‖.---"Nec poſt rationem, medicinam eſſe inventam, ſed poſt "inventam medicinam, rationem eſſe "quæſitam §."

From what I have ſeen of the *Tetanus*, I make the following concluſions:

That it is a ſpaſm ſeated only in the muſcles, ſubſervient to the animal functions.

* Collin. † Boennecken.
‡ Parey. De Haen. ‖ De Medicam. Cap. 18.
§ Celſus.

That whether original, or ſymptomatical, it is cauſed by irritation.

That the poſition of the body, depends on a greater quantity of muſcular fibres, contracting againſt a leſs quantity.

That the curative indications are, either,

I. To reſolve partial irritation into univerſal irritation by *Metaſtaſis*.

O R,

II. To remove irritation from the parts affected by *Derivation*.

O R,

III. To take away the irritability of the parts affected by *Sedatives*.

O R,

IV. To leſſen the power of the parts affected by inducing an *Atony*.

The firſt is effected by a judicious application, and ſometimes a repetition of cold baths; which, in imitation of nature,

brings on an artificial intermittent (which, according to HIPPOCRATES, is a ſolution of any prior diſeaſe in the body,)* beginning with rigor, ſucceeded by heat;--- or by wine, cordials, and ſuch means as cauſe a fever without a rigor.---The ſecond is effected by bleeding, or ſweating, or vomiting, or purging.---The third has been attempted by opiates, and calmants;---and the fourth by warm baths and relaxants.

Judgment is required to decide where either method is to be uſed; depending on the age and habit of body of the patient; and on the cauſe of the diſeaſe, and on its ſymptoms. They are not to be confounded together, but are to be uſed ſeparately; and where ſome almoſt immediate benefit is not obtained, the inference is, that that proceſs is not ſuitable to the ſtate of the patient, and recourſe ſhould be had to one of the others.

* Epidem. Lib. VI. Sect. 6; 9.

The

The *Tetanus* is endemial among children in many places between the tropics; but by no means, as ſome have ſuppoſed, depending on ſituations near the ſea, or expoſed to winds *. When it invades them it is generally before the eighth or ninth, and ſeldom after the twelfth or fourteenth day from their birth. AETIUS knew but little of this diſeaſe, when he ſaid, "Neque autem infantibus, neque ſenibus convulſio fit Tetanica †:" nor was ARETÆUS conſiſtent with his uſual preciſion, when he aſſerted, "Pueri aſſiduè hoc morbo vexantur, ſed non admodum pereunt---juvenes rarius quam pueri id patiuntur, ſed crebrius intereunt---viri minime---at ſenes inter omnes magis et eo vitio corripiuntur et eo necantur ‡."

The French term the *Tetanus* in children, *Mal de Mâchoire*. The Engliſh call it the *Jaw-falling*. The reaſon for both

* Baion.

† Tetr. II. Serm. 2. Cap. 39.

‡ De Tetano, Cap. 6.

theſe

these appellations, is, that the lower jaw is the first that is attacked, and often the only seat of the rigidity. Besides, the lower jaw sometimes cannot be brought to join the upper jaw, and the mouth keeps rigidly open, as ARETÆUS (and he only) observes sometimes happens in the *Opisthotonus*. It frequently ends in a Paralysis of the muscles of the Jaw, when the chin falls down, which the negroes tie up with bandages. This, by the ignorant, is taken for a dislocation: not but that a dislocation of the jaw does also sometimes happen, and like this, is a mortal symptom *.

Some nosologists, I know not why, call the *Tetanus* in children *Trismus Nascentium*:---which rendered in English, implies, *a grinding, or gnashing of the* TEETH *of new-born babes.*

The word Τρίσμος, imports *Stridor*; Πρίσις, Βρυγμὸς;--and is never used but where

* Εν τοῖσι τετάνοισι καί οπισθοτόνοισι γένυες λυομεναι θανάσιμον. HIPP. Coac. Prænot. N. 361.

a sound,

a ſound, or noiſe, is meant to be expreſſed. Beſides, the *Triſmus* is a temporary and partial ſpaſm of the jaw only; not, properly ſpeaking, a diſeaſe of itſelf, but a ſymptom, attending many ſpaſmodical affections. It is cauſed by the *Pterigoid* muſcles endeavouring to act, when the *Temporal* and *Maſſeter* muſcles are contracted.

Negro children are chiefly the victims of this diſeaſe in the Weſt-Indies. The infants of the poor and miſerable inhabitants of *Vivarais*, in France, are ſubject to the *Sarrette*; and thoſe of the Mediterranean Iſlands, to a ſimilar diſeaſe; both, in ſome circumſtances, analogous to the *Tetanus*. But the true *Tetanus* among children, as well as all other *Tetani*, is the genuine produce of warmer climates. It may occur in other places, but does not often. In *Switzerland*, *Tirol*, *Piedmont*, and *Savoy*, many children periſh by convulſions, but not by Tetanic ones. Obſerving what HOFER has written, and others have erroneouſly propagated,

gated, I aſcertained this fact while I was in thoſe countries; and had the corroborating teſtimony of Doctor MENGHEN at *Inſpruck*, and Doctor DAQUIN at *Chambery*: both ſkilful phyſicians, of long practice, and men of the greateſt candour and judgment.

The cauſe of the *Tetanus* among children in the Weſt-Indies, is generally attributed either to the intemperance of the mother during pregnancy, or to the irritation of the navel after birth; or to the ſmoke of the lying-in room, or to the dampneſs of its ſituation; or to the careleſsly letting in cold air upon the child. Some people even attribute it to the wickedneſs of the mother, to avoid the trouble of bringing up the child.---The negroes often charge it to the malice of *Obea*, or witchcraft. Speculators have ſearched for other cauſes in the moſt remote corners of nature.

That negroes who never ſee this accident happen to white children, nor to

to any others that have proper care taken of them, if they are born healthy, ſhould attribute it to witchcraft, is very natural; but that phyſicians ſhould be ignorant of the cauſe, and that the effects ſhould ſo often be permitted to happen, is extraordinary and unnatural.

Some of the above cauſes, doubtleſs, occaſionally take place; but the more common ones are, the ignorance and inexperience of the mother, and the want of attention, or neceſſaries, to keep the child dry and clean; for it often remains wrapped, or rather girted up, in the ſame wet rags for days together. In theſe things, and in not ſufficiently purging the child, to carry off the meconium, and firſt milk, and from the heat and cloſeneſs of the huts, an irritation is cauſed, from which the miſchief originates.

To prevent the evil in the Weſt-Indies, which is moſt often ſeen where the mothers of the children are very young,

or

or very poor, or very worthleſs, ſuch women, at the time of their lying-in, ſhould not be committed to their own management, nor be ſuffered to remain in their own houſes, ſolely under the care of an old negro woman midwife, who is generally ſuperannuated.

Upon every eſtate there ſhould be a convenient and ſpacious lying-in room; and for many reaſons, it ſhould be as near as poſſible to the overſeer's houſe. No fire ſhould be ſuffered to be made in it, unleſs there was a properly conſtructed chimney, to convey away the ſmoke. But it would ſtill be an advantage to have a ſmall anterior room to have the fire-place in, that the bed-room might not be ſtifled with heat, in which negroes ſo much delight. Here the woman ſhould be delivered, and remain under the direction of the ſurgeon of the eſtate, and the indulgence of the overſeer, until all the danger of both mother and child is over, and until the mother

mother is able to take care of her child. But when, as it often happens, that the mother is an improper perſon to truſt with the child, it ſhould be taken from her, and be given to a careful nurſe to bring up.

The deaths occaſioned by this diſeaſe in the Weſt-Indies, conſtitute a greater drawback upon the population of the negroes, than can eaſily be imagined; as the numbers that periſh annually are ſcarcely to be credited. This drain of native inhabitants is far more detrimental to eſtates in the courſe of time, than all other caſualties put together.

In the French Colonies, if DAZILLE, who lived there, is to be credited, the depopulation of negroes ariſes, from a want of ſufficient food, from bad clothing, and from working them beyond their ſtrength:---" *Une norriture inſuffi-* " *ſante, le défaut de vêtements, & un tra-* " *vail au-deſſus leurs forces, ſont périr le* " *produit*

"*produit annuel de la génération des negres, &*
"*l'objet de l'importation**."

These things happily do not exist, I know, in the English Colonies; and I have many doubts of their existence in the French. An individual may be absurd or wicked, but a whole nation cannot. The French are not less renowned for mildness than for liberality; and if such a dereliction of virtue was not repugnant to self-interest, there would be but few among them found to make it from avarice.

As the *Tetanus* in children cannot be cured, though an accidental recovery sometimes happens, it is unnecessary to recite how

* *Observations, &c. par* M. DAZILLE, *Medicin, Pensionaire du Roi, &c.* published at Paris in 1776. This gentleman says, page 22, that in the French colony of Hispaniola, there have been for a certain number of years only about 300,000 negroes, though the annual import has been nearly 25,000. That there are in the Isles of *France* and *Bourbon*, only 40,000, notwithstanding the import into those islands has been annually about 3000, and that the mortality in the most healthy colonies, is nearly the same as in the most unhealthy, from the above causes which he assigns.

often cold baths, and other means have been tried in vain, which might have been ſucceſsfully employed in its prevention.

I have given this part of ſubject conſideration, becauſe it is a remediable evil. It is not a vain declamation againſt grievances that do not exiſt; or exiſting, admit of no cure. This ſtrikes not leſs forcibly at the intereſts of policy, than at the concerns of humanity: and I am ſatisfied that theſe remarks will be attended to in the French, as well as in the Engliſh Colonies.

ON

ON

CANCERS.

A CANCER is one of thoſe calamities, againſt which there is no prevention;---the cauſe creating no ſuſpicion until the effects are preſent. A ſurgeon, or a phyſician, would be thought to have wonderful ſagacity, who could prognoſticate what injury, or what habit of body, would generate a carcinomatous diſeaſe.

Cancers are of two ſorts; Schirrhous, or Occult, and Ulcerated. There is alſo a minor ſpecies of Cancer, called a Cancerous Ulcer. Cancers are ſeldomer ſeen in the Weſt-Indian Iſlands, than on the neighbouring Weſtern Continent of America. The diſeaſe which the Spaniards at *Quito*, call *Mal del Valle*, or *Vicho*, which is a gangrene in the rectum, and often ſucceeds fluxes, and ſometimes attacks people while they are ill with fevers, is unknown in the iſlands. So are Cancers of the Uterus, and an Ulcerated Cancer, called the *Bay-Sore*.

Cancers of the Uterus, which are always lingering, excruciating, and fatal, are ſo common in the city of *Lima*, and its neighbourhood, that the ladies ſuppoſe it contagious, even from ſitting in a chair after an infected perſon.

The *Bay-Sore*, which is a true Cancer, commencing with an ulcer, is endemic at the *Bay of Honduras*; it is frequently ſeen on the Muſquito Shore, and along that part of the Continent.

This

This diſeaſe is alſo fatal, if neglected; but being within the reach of ſurgery to remedy, that remedy is the chief object of the preſent diſcuſſion.

Every part of the face, body, and limbs, is ſubject to be the ſeat of this diſeaſe.

The cauſe of it is ſo little to be aſcertained by any reference to the ſtate of the habit of the body, that it is generally ſuppoſed to ariſe from ſome external agent.---The Indians ſay, that it is produced by a large fly depoſiting its eggs in the fleſh.

The method of curing this Cancer is very ſimple, though painful: but from the experience I have had, I can venture to aſſert, that the ſame method will cure any external cancer whatever, that is curable, in any part of the world, where the application can be made in ſuch a manner, that the diſeaſe and the medicine may be brought in contact.

The method is this:---Spread a plaſter, of *Diachylon with Gum*, upon thin leather, the ſize of the cancer:---ſuppoſe the plaſter to be as large as a crown piece, or a Spaniſh dollar, ſprinkle on it a ſcruple of *Corroſive Sublimate of Mercury*, finely powdered; and ſo in proportion to a larger, or ſmaller plaſter. This plaſter muſt be applied to the cancer, and remain on it forty-eight hours; but if there is any apprehenſion that it has not done its office in that time, it muſt remain longer. Then take it off, and apply a poultice of bread and milk, with a little olive oil, which muſt be renewed frequently, until the Cancer comes intirely out, by the roots as it were. The part is then to be dreſſed, digeſted, and cured, as a common ulcer. A purge or two with *Calomel* muſt precede the application. No other preparation is neceſſary, unleſs the patient is groſs, and requires a cooling regimen. *Bark* is ſometimes neceſſary to forward the digeſtion and cure.

To

To my own narration, let me add the authority of an eminent ſurgeon, now at Kingſton in Jamaica*, who lived many years, and was in extenſive practice, and in great reputation for curing Cancers at the *Bay of Honduras.* He ſays, that this method never failed him once, in many hundreds of caſes: and that he there extracted one, which weighed eleven ounces, from the inſide of a man's thigh; and that the cure was completed in four weeks.

It is ſurpriſing to ſee how intirely Corroſive Sublimate, thus applied, will ſeparate the unſound from the ſound parts; and let the figure of the Cancer be what it may, and its ramifications ever ſo numerous, the whole diſeaſed part will be detached, and come away all together, leaving the cavity clean, and free from the ſmalleſt remains of diſeaſed fleſh.--- This is extracting a Cancer, and I believe there is no other way of curing any genuine Cancer, except by extirpation with a knife.

* Mr. Walter Davidſon.

Crab Yaws, as they are called, which are the relicks of the *Yaws*, in the feet, are extracted by the ſame application. There it is neceſſary, only to pare off the top of the *Yaw*, and then lay upon it a Diachylon with Gum Plaſter ſprinkled with the Corroſive Sublimate powdered, the ſize of the *Yaw*, and let it remain for two or three days.---On taking off the plaſter, the *Yaw* generally comes out, like a plug; if not, it digeſts out in a day or two, with common dreſſings, and the part ſoon gets well.

Cancerous Glands, and Tumours, not ulcerated, are extracted in the ſame manner; but before the application, the cuticle is to be removed on the preceding day, by a bliſter, or by a ſlight rubbing with a cauſtic, to the extent and dimenſion intended to be acted on :---for if the tumour be only ulcerated in the middle, it will be neceſſary to circumſcribe the whole induration, and ſometimes, though rarely, it may be neceſſary to put a little of the powdered Sublimate round the cir-

cumference of the diseased tumour, when it begins to loosen, should any part adhere obstinately, to hasten its separation from the sound flesh.

Arsenic will not produce these effects. I have tried it by every mode of application, in consequence of the reputation it has undeservedly borne, in cancerous diseases.

In Cancers, every thing depends on the mode of applying the Sublimate as I have described:---Yet besides the solubility of Sublimate, there is a specifical difference between the corrosion of Sublimate and Arsenic. Arsenic applied alone, or quickened with the addition of Sublimate, to old ulcers, for example, to destroy fungous flesh, which in leprous and leucophlegmatic habits, is frequently so quick of growth, and so enormous in hot climates, that no other application, but the knife, is equal to its removal, rots indiscriminately the sound and unsound flesh wherever it comes in contact. It therefore

fore requires great care in the application. I have known it, when injudiciously applied, to eat down to a large artery, and occasion the loss of a limb. Corrosive Sublimate used to the same end, though an improper application, will not cause the same mischief, for it is bounded in its action by healthy flesh, or acts on it but slightly as a destroyer.

Arsenic has a tendency to deaden, and destroy the functions of organised parts; Corrosive Sublimate to inflame those parts, and increase the circulation of their contents.

Surgeons have never known but two topical modes of treating inveterate cancers:---one by amputation; the other by corrosion. The first is often impracticable, and the latter always dangerous.

The empirics have succeeded better; their method is to extract them. I have seen many of these itinerants, in different countries, extract Cancers with the greatest

eſt facility. And before I knew that the only application, however diſguiſed, which could produce ſuch a wonderful effect, was Corroſive Sublimate, I had tried every kind of mineral and vegetable preparation that could be thought of, without ſucceſs.

A late very ingenious ſurgeon in London was miſtaken in his theory of the effects of Arſenic, as ſpecifical in Cancers*. His conjectures, which he had adopted from others, that Cancers are "produced from inſects, or the germina "of them, taken up from the air by the "lymphatic veſſels," as a mere hypotheſis, were well ſupported; but when proof is required, the beſt arguments alone, are invalid.

* AVICENNA certainly gave *Arſenic* internally, for ulcerations in the lungs. He ſays, in Lib. II. Tract. 2, there are three ſorts of *Arſenic*; White, Yellow, and Red. Of the latter he ſays, "datur ad potandum, in-"flatis cum aumeli, et hydromelle, et aſſumitur, cum "gumma Pini, ad *Tuſſim antiquam, et ſputum ſaniei et* "*ſanguinis*: et quandoque ponitur in pilulis, quæ ſunt ad "*Aſthma*."

ON THE

BELLY ACHE;

OR,

COLICA PICTONUM.

MUCH has been written of the history, cause, and effects of this disease, by CITOIS * and Sir GEORGE BAKER †; a multitude have followed

* "De novo et populari apud *Pictones* Dolore Colico "Bilioso." This Colic received the name from *Poitou* in France, where it first appeared in 1572. The name of *Colica Pictonum* was given to it by CITOIS, or CITESIUS, as he calls himself, in his *Opuscula Medica*, printed at Paris in 1639. He is the first who wrote expressly on this disease, and, according to *Eloy*, in 1616; and not RIVERIUS, as HILLARY and some others imagine. RIVERIUS did not write on this disease until 1640.

† London Medical Transactions.

their

their ſteps:---The ſubject, however, is not quite exhauſted, and a few words may ſtill be added, without diminiſhing the credit of what has been already done, or increaſing the uſeleſs catalogue of the *ſervum pecus imitatorum.*

The *Belly Ache*, in the Weſt-Indies, is the offspring of diſeaſed ſecretions, from debility, in the ſtomach and inteſtines. It is endemial in the Weſt-Indies, and epidemical, or accidental in moſt other parts of the world.

In Europe, I believe, it has often viſited particular diſtricts epidemically; for the devaſtation it formerly made, in many places, muſt have had a cauſe more general than wines that had been impregnated with Saturnine Solutions:---one of its notorious cauſes.---It often ſtill appears in ſome countries, in the autumnal ſeaſon, but not uniformly. In the laſt Autumn I did not ſee one perſon afflicted with it, in any town near the Rhine, from *Cologne* to the lake of *Conſtance*. There

was not one patient with the *Belly Ache* in the hoſpitals at *Coblentz*, *Frankfort*, *Manheim*, nor *Straſbourg*: nor did I ſee any afterwards at *Kempten*, *Inſpruck*, *Brixen*, nor *Trent*: nor any peaſant, or other perſon, with its paralytic effects.---The reſult of my remarks in Normandy in the Autumn of 1785, was the ſame.

Doctor Menghin of *Inſpruck* told me, it is a common diſeaſe in the *Tirol*, but that it is generally attributed to the preparations of lead, with which the people in the *Tirol*, and in Italy, mixed, adulterated, and ſweetened their wines. He cautioned me to avoid all ſweet wines whatever, but particularly the common tavern wines upon the road, that had a ſweet taſte, in the Tirol and in Italy. I mention his excellent advice as a caution to others.---I never deviated from it but once, and paid dearly for it at *Viterbo*.

Whatever is the cauſe of the *Belly Ache*, the ſymptoms and effects are the ſame, varying only in extent.---The principal ſymptoms are, coſtiveneſs generally, ſickneſs

ſickneſs of the ſtomach, or vomiting, and pains about the navel; which, when excruciating, give the eyes a glaſſy and wild appearance. When the diſeaſe is obſtinate and often returns, a paralyſis is generally the effect:--firſt, of the hands and arms, then of the feet and legs. This paralyſis is attended with a waſting of the muſcles of the limbs affected, and a contraction of the parts (as flexors are with more difficulty deſtroyed than extenſors), particularly of the hands, and there moſt remarkable in the *Abductor* and *Flexor* muſcles of the thumbs: where the waſting always begins, and when people recover, by coming to England and uſing *Bath* waters, the remains of the diſorder are moſt viſible.

In habits of body diſpoſed to receive this diſeaſe, other diſeaſes will bring it on; ſo will coſtiveneſs, aſtringent medicines, bark, acids, irregularity in diet, check to perſpiration, anxiety, and indulging aphrodiſiacal paſſion.

The poraceous matter diſcharged in vomiting,

vomiting, in ſevere attacks, is generally ſo corroſive, and ſtyptical, as to excoriate and contract the throat and fauces; and frequently changes the appearance of ſilver utenſils to a black colour, as if they had been in contact with the phlogiſton of ſulphur.

The Belly Ache ſeldom attacks people newly arrived in the Weſt-Indies; yet HILLARY is ſo miſtaken as to aſſert otherwiſe. The natives, and long reſidents, are almoſt always the ſole objects of this diſeaſe.

Soldiers, notwithſtanding their irregularity in living, are ſeldom afflicted with the Belly Ache, though frequently with the *Bilious Colic*, which is generally brought on by drunkenneſs and its conſequences. This diſorder, tranſient medical people have often miſtaken for the Belly Ache: and its ſubſequent debility for paralyſis.

The Belly Ache, as a diſeaſe, is almoſt as common as it ever was among the in-

 habitants

habitants of the Weſt-Indies; it is thought otherwiſe chiefly becauſe its devaſtations are not ſo often ſeen, in wandering ſpectres about the ſtreets, as they were formerly. The principal reaſon of this, is, that the medical people there, at preſent, underſtand their profeſſion, and formerly they did not. They now treat the diſeaſe properly, in the beginning, and prevent relapſes; formerly they knew not how to do either.

Yet the diſeaſe is certainly as much a natural production of the Weſt-Indies as ever; but the improved ſtate of cultivation and knowledge has, no doubt, abated the frequency and violence of this, as well as of many other diſeaſes. The lands are more cleared than they were, and people live and clothe themſelves more ſuitably to the climate than they did formerly. Time and direful experience have made them wiſer than thoſe who, without rules to guide, or examples to follow, firſt encountered theſe inhoſpitable climes.

Grog drinkers are not particularly ſubject

ject to the Belly Ache; nor does rum appear to have any property that tends to produce it.

I have known a multitude of people in the West-Indies afflicted with this disease, who seldom drank any rum, at least not to excess. Mr. *John Ellis*, F. R. S. never drank any rum, yet he was constantly harassed with the Belly Ache, and became at last paralytic, from frequent violent relapses, notwithstanding his great temperance and prudence.

The notion that solutions of lead, from the worms, and other utensils employed in the rum distilleries, are among the common causes of the Belly Ache in the West-Indies, or that there is ever any detectable quantity of lead in rum, are both equally distant from my opinion and observations.

Though the use of many preparations of lead, is much more inoffensive than is generally believed (and considering the

indiſcreet uſe of them in Lotions, Coſmetics, and a variety of other local, as well as internal purpoſes, it is fortunate for many people that it is ſo), yet it is ſcarcely poſſible to ſuppoſe FERNELIUS was ſerious, when he ſaid, an arthritic patient took a *pound and half* of White Lead, inſtead of ſugar, in fifteen days time, and ſurvived it*.

Writers, I believe, have not accurately diſcriminated, between the effects of the Calces, Salt, and Phlogiſton of Lead:—In the latter of which its deleterious quality conſiſts, and that principally in the act of quitting the earth of the metal, in exhalation.

That taking the Salt, or Sugar of Lead, as it is called, inwardly, ſo much

* Huic a me jam doloribus liberato, Empiricus quidam *Plumbi Pulverem* adverſus Arthritim ita commendavit, ut in eo ſolo ejus recurrentis præcautionem poſitam eſſe ſtatim perſuaderet. Cujus idcirco uſum amplexus, pulveris ejus *Seſquilibram* ex juſculis, ex vino & piris coctis, aliiſque cibis, ſacchari loco, dierum quindecim ſpatio abſumpſit. *De Luis Ven. Cur. Cap.* 7, p. 230.

extolled

extolled by phyficians and chemifts of the two laft centuries, in pulmonic difeafes, quinfies, intermittents, dyfenteries, hæmorrhages, and inflammations of the vifcera, will caufe the Belly Ache, as well as being expofed to the vapour of its phlogifton, I believe is certain; but it is not fo inconteftably proved :---nor whether it may not fafely be taken in fome vehicles, though poifonous in others.

Lead itfelf is perfectly innocent, while its phlogifton is kept bound down and united with its earth :—for which reafon miners fuffer no inconveniency from it in mines deftitute of inflammable air.

It is otherwife when fire is applied to it, which difcharges its phlogifton; therefore fmelters, and cerufe manufacturers are the victims of its poifon: and thofe exactly in proportion to the quantity of vapour they are expofed to.

Cerufe is incapable of producing any poifonous vapour, until its phlogifton

is renovated, and volatilised by the application of oil; for which reason painters in oil suffer.

The friction of the types in printing, together with the oil in the ink, and the drying of the types at the fire, cause an exhalation that is injurious to printers. Using the letters warm have frequently caused palsies. I have known many printers subject to the *Belly Ache*, only while they remained in their office; and always free from it otherwise. A compositor, at Mr. *Davis*'s in Chancery-Lane, where this book is now printing, had the Belly Ache for four months, and was in a miserable condition, until he applied to me. He was cured in a few days, and returned to his work, and remained well for five months afterwards. He had been accustomed to moisten his fingers in his mouth, to take up the letters with more facility, and also of frequently putting letters in his mouth, while working; by which habit he frequently swallowed a portion of the solution of the metal, in the impregnated saliva.

But

But now to the CURE of the *Belly Ache*, and the prevention of its paralytic effects: and if what I have to relate, does not teach a ſucceſsful method of treating this moſt diſtreſſing diſorder, I ſhall be as much diſappointed, as thoſe will be, who look for hypotheſis and oſtentation, where nothing is intended but plain matter of fact and utility.

It is not to be expected that relapſes can be prevented, while people continue to follow thoſe occupations, and habits, which cauſe the diſeaſe. That can only be done by avoiding the cauſe. What I propoſe is, to cure the diſeaſe when it firſt appears; and to adviſe the inhabitants of the Weſt-Indies, workers in Lead, Painters, Plumbers, Printers, Enamellers, Gilders, Drinkers of auſtere or adulterated Wines, Cyder, &c. to purſue the following method immediately on their being attacked.

When the diſeaſe comes on, if the body is coſtive, let a doſe of *Manna* and

 Cream

Cream of Tartar be taken; or what anſwers better, if it can be procured, a table ſpoonful of *Caſtor Oil*, called *Oleum Ricini*, and *Oleum Palmæ Chriſti*:---If one ſpoonful does not operate within a few hours, another ſpoonful is to be taken, and to be repeated every four hours, until it does. The oil may be taken alone, or with a little ſugar, and four table ſpoonfuls of Simple Peppermint Water. Where ſtools are procured with difficulty, an emollient and purging Glyſter may be given, to aſſiſt and quicken the operation of the purging medicine.

After the coſtiveneſs has been removed, and the bowels have been well cleanſed, the following ſolution will cure the diſeaſe:

THE VITRIOLIC SOLUTION.

Take of *White Vitriol, three drams*;
Roch Alum, one dram;
Cochineal, three grains;
Boiling Water, one pint:

Mix

Mix theſe all together in a marble mortar, and let the ſolution ſtand until it is cold, and the ſediment is ſettled at the bottom: then pour it off clear for uſe.

The Cochineal is firſt to be rubbed fine in the mortar, then the Vitriol and Alum are to be added, and alſo rubbed fine, and laſtly, the Boiling Water is to be poured on the ingredients, and ſtirred until they are diſſolved. This is the ſolution mentioned at page 358, which I have now given in Engliſh, for the benefit of thoſe employed in thoſe important branches of buſineſs I have mentioned, and who, unfortunately, too often, ſtand in need of its uſe.

Of this Solution, a table ſpoonful (for a man or woman) is to be taken every morning faſting, and to be continued for ſeveral mornings after the pain has ceaſed:---keeping the body open, if this Solution ſhould not do it, by taking every night, or every ſecond or third night, at bed-time, a table ſpoonful of *Caſtor Oil*, by itſelf, or mixed as before mentioned.

The

The Solution generally cauſes a retching; ſometimes it will act as a purgative; in either caſe it will be almoſt equally ſerviceable; and when a table ſpoonful produces neither of theſe effects, the doſe muſt be enlarged until it does. There is no neceſſity for diluting to encourage vomiting. The nauſea the medicine cauſes is very diſguſting, but in that much of its efficacy conſiſts.

I ſometimes increaſe the quantity of the Vitriol, and ſometimes the proportion of Alum, in the Solution: ſometimes I omit the Alum intirely in the beginning of the diſeaſe, in very coſtive and bilious habits; and where vomiting is neceſſary to cleanſe the ſtomach.

Some years ago Roman Vitriol was introduced into practice in the Weſt-Indies, for the Belly Ache. I often uſed it, but never after I diſcovered the ſuperior efficacy of the above Solution; ſince that time, I have not had one patient, however ſevere the diſeaſe, become paralytic after it.

In

In violent and ſudden attacks of the Belly Ache, where the patient has been long ſubject to it, and where relapſes have frequently happened, they generally come on with excruciating pain, and exceſſive vomiting. Here it is in vain to attempt forcing a paſſage through the body, however locked up it may be, by any purgative whatever; nor is it good practice but in extreme neceſſity, to uſe Opiates to eaſe the pain; nor to unite Opiates with purgatives, a practice adopted by HUXHAM from RIVERIUS.---From opium and draſtic purges, great miſchief has ariſen; and it is from hence that the Belly Ache made ſuch havoc formerly in the Weſt-Indies.

In this ſituation of the diſeaſe, the patient is to be vomited by ſmall and repeated doſes of the Vitriolic Solution, without the Alum; then to have a Glyſter, and to be immediately put into a tub of warm water, ſo that the water may riſe as high as the cheſt; here he is to remain for a conſiderable time, if his

his ſtrength will permit; and as the ſtomach will generally retain medicine while the patient is in the bath, he ſhould, when his ſtomach is eaſy, take the Caſtor Oil, or a ſolution of Manna in a draught of warm ale, or neutralized Lemon Juice, and large doſes of Magneſia.

If the pains are not abated by the bath, a large bliſter ſhould be applied to the belly, centrally over the pain.

The vomiting removed, the body in a laxative ſtate, the Solution and the Caſtor Oil are to be taken in the manner I have already related.

CONCLU-

CONCLUSION.

THIS volume being increaſed beyond the limits I at firſt imagined the materials I had aſſigned it would extend to, I am prevented ſaying all that I intended on the effects of the VITRIOLIC SOLUTION, in ſome other diſeaſes.

However, I cannot omit obſerving, that in hæmorrhages from the lungs, whether attended with great arterial diſcharges, or only a ſpitting of blood, I have known it, taken in nauſeating doſes every eight hours, to remove the diſeaſe: with this caution, in young and plethoric habits, that evacuations were previouſly made, and the plethora ſubdued.---But the beſt ſecurity againſt a relapſe, and to eſtabliſh a permanent cure, is a long ſea voyage.---Mr. *Reeder*, a gentleman between forty and fifty years of age, in the

the Weſt-Indies, had an hæmorrhage from his lungs, and often bled nearly to death. He made ſeveral ſmall voyages, and always found himſelf perfectly well at ſea; but as often as he returned, and remained a week or ten days on ſhore, the hæmorrhage returned. Finding his ſtate ſo perilous, he bought a ſmall veſſel, and being a man of ſenſe and fortitude, he conſigned himſelf to the ocean and went from place to place, until he conquered his infirmity, and regained his loſt health. The accident happened about five years ſince:---He is now well.

In all pulmonic oppreſſions, where reſpiration is performed with difficulty, and where expectoration is to be promoted, and the bronchial glands are to be unloaded and cleanſed, it is of great utility in nauſeating, or ſlightly vomiting doſes.

In moiſt phlegmatic aſthmas, in catarrhal coughs, and in the hooping cough, its effects are wonderful; taken every morning faſting, in doſes, to cauſe

a flight retching. In the fame manner it removes deftuxions upon the lungs, bronchia, and trachea, from relaxation of the parts.

The common dofe of the VITRIOLIC SOLUTION to create a flight retching, for a man or woman, is a table fpoonful: for a child of fix months old, a tea fpoonful.

In chronical difeafes, it is to be taken every morning fafting, for a few mornings, then to be omitted and afterwards to be refumed, and to be continued at intervals, as occafion may require.

It is to be regretted that art cannot render this SOLUTION agreeable to the tafte, without deftroying its virtues. Nor will the ingredients of which it is compofed, taken in the form of pills, produce the fame effects as they do in Solution. But it has advantages over every other naufeating, or emetic medicine whatever; which are, that the patient is not haraffed with its operation, for that is generally

rally inſtantaneous, and as ſuddenly over, and always leaves the ſtomach ſtrongly invigorated. Beſides it requires neither dilution with it, nor regimen nor reſtriction after it.

WHITE VITRIOL, though now almoſt out of uſe, for internal purpoſes, was once a great medicine among the chemiſts. But it has long ſince been expunged for its vulgarity, by refinement. There are many other excellent remedies that the chemiſts employed, which now lie forgotten among heaps of traſh, in oblivion, with their inventors.

FINIS.

ERRATA.

In the N. B. after the Preface, line 8, for *Amſterdam edition* read *Leyden edition*.

Page 183, line laſt, for page 17 read 18.
191, line 5, for *mucous* read *mucus*.
218, line 6, for *terms* read *forms*.
222, line 22, for 27 read 28.
236, line 15, for ψύκει read ψύχει, and for ξηφαίνει read ξηραίνει.
240, line 19, for *Vervain* read *Vervain-mallow root*.
278, line 8, for *Hiſt. Mat.* read *Hiſt. Nat.*
34[illegible], line 11, for νιφριτικὰ read νεφριτικὰ.
366, line 14, for *accompany* read *accompanies*.
408, line 2, for *many* read *may*.
509, line 3, for *Menghen* read *Menghin*.